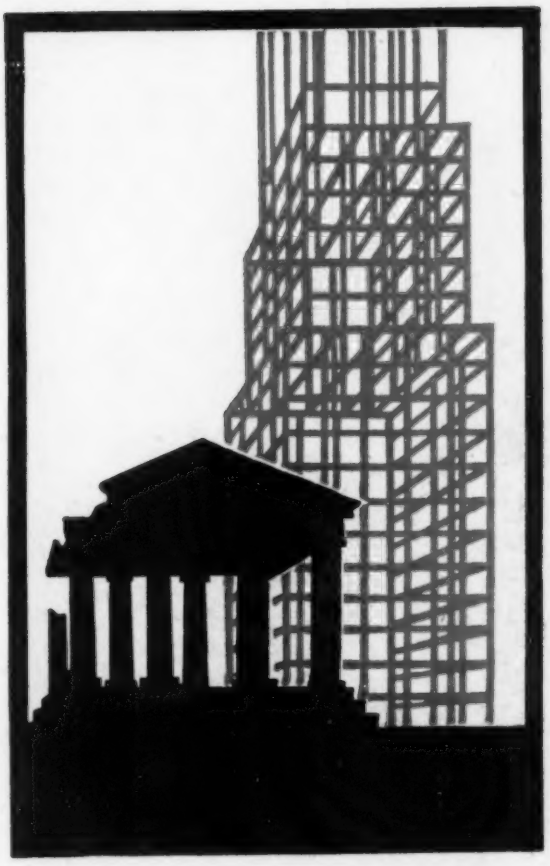
MAY 11 1931

THE ARCHITECTURAL RECORD



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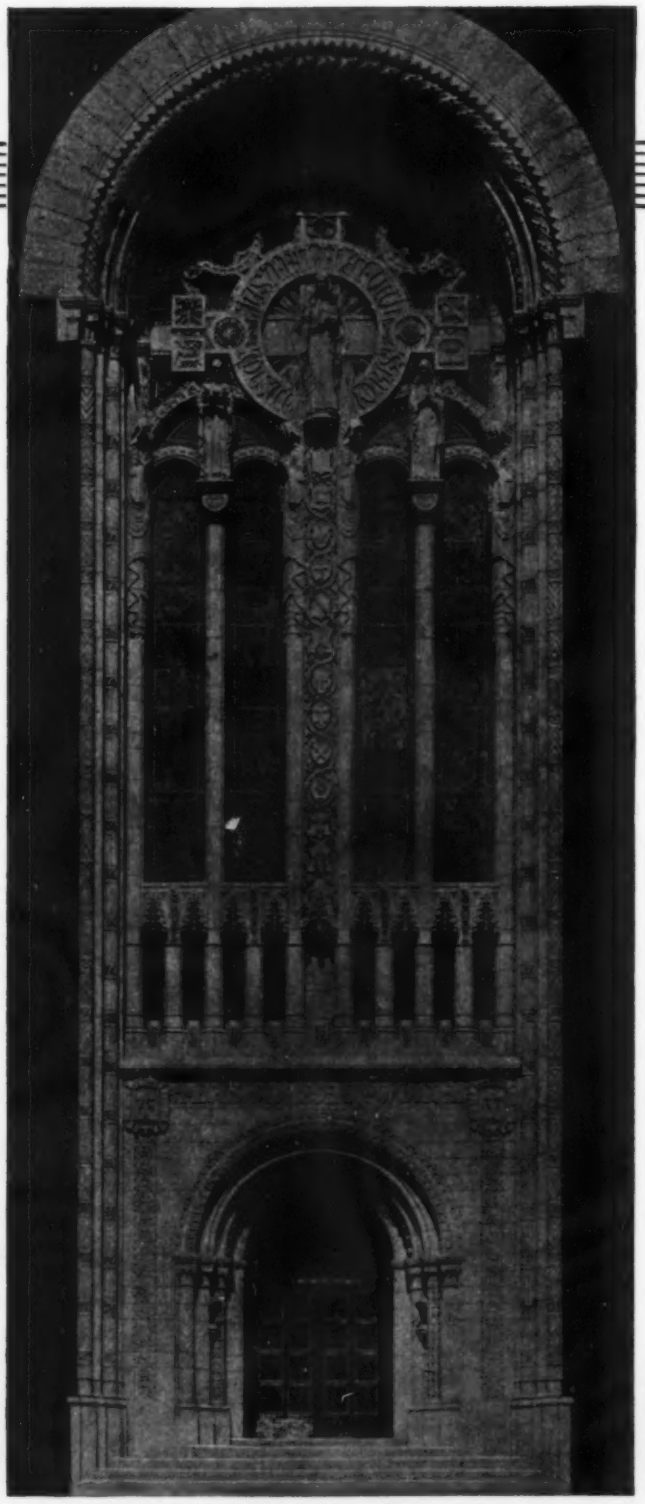
for facing and ornamentation



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THE ARCHITECTURAL RECORD

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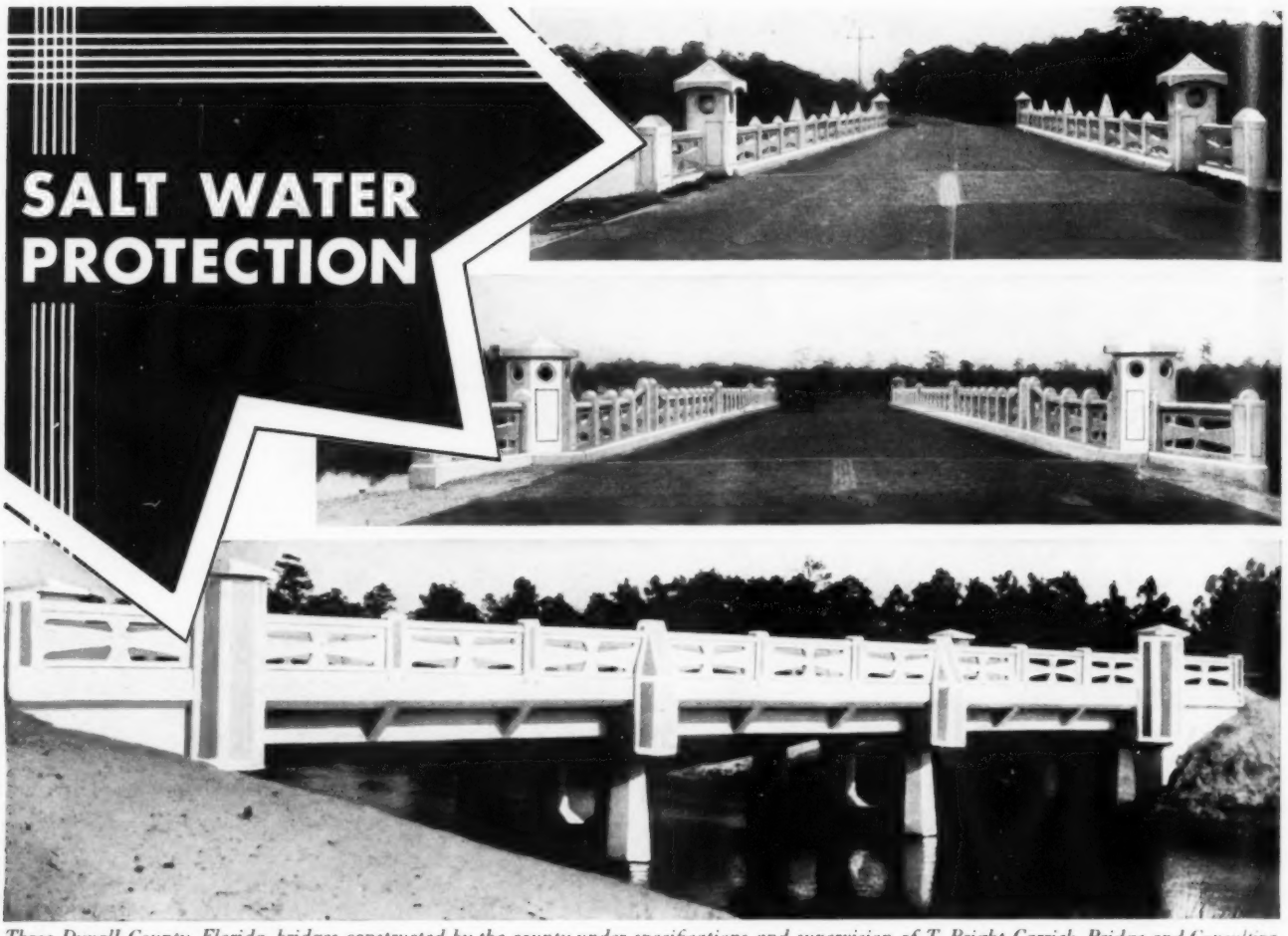

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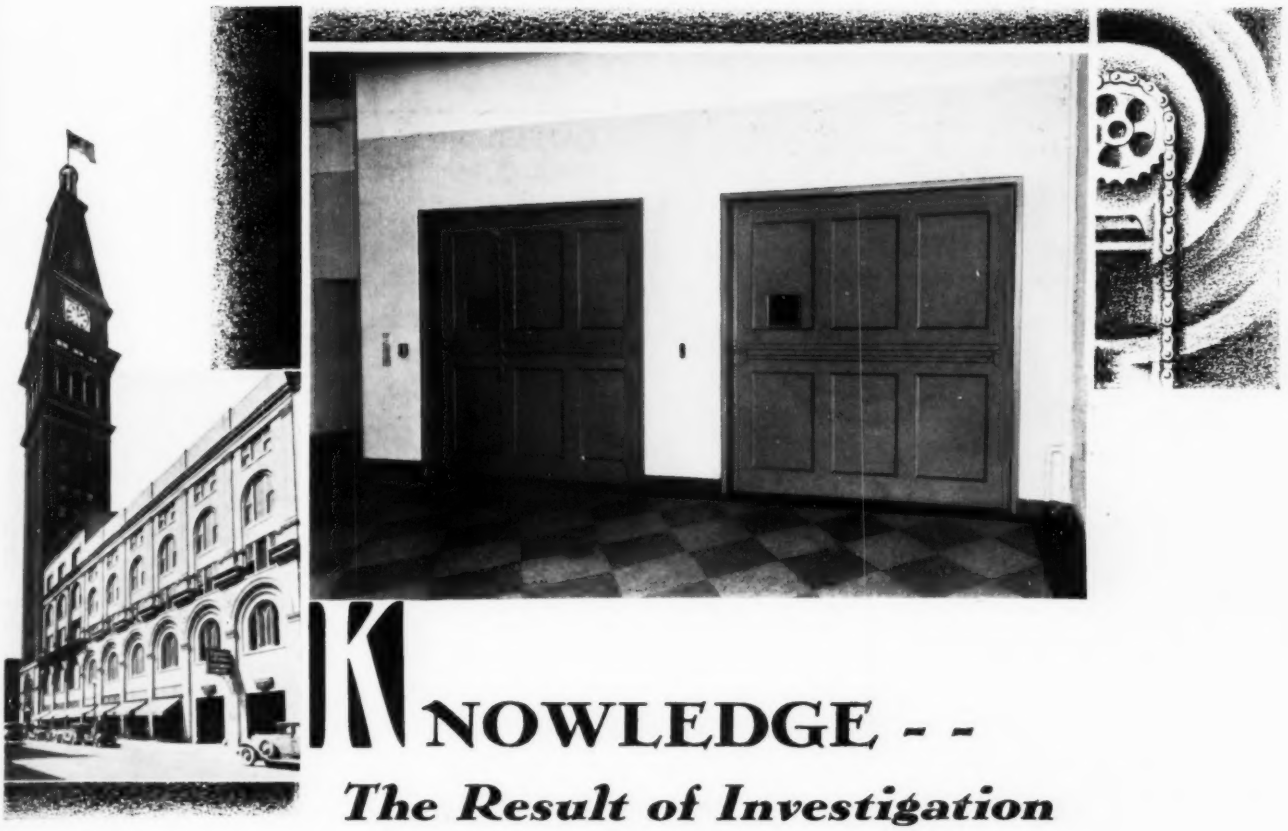

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ARCHITECTS' ANNOUNCEMENTS and CALENDAR

C. Grant La Farge, Samuel Adams Clark, and Christopher La Farge announce the dissolution of the firm of La Farge, Warren and Clark. Samuel Adams Clark will continue the practice of architecture under his former firm's name of Warren and Clark at 136 East 57th Street, New York City. Jefferson M. Hamilton will be associated with him.

Luther Fentress, architect, has moved from San Marino to 238 South Hudson Avenue, Pasadena, California.

W. M. Brittelle has changed his address from 3522 Clifton Street, El Paso, Texas, to Sunshine Building, Albuquerque, New Mexico.

Virgil H. Fontaine, architectural engineer, has moved his office from 525 Citizens Building to 409 Norton Building, Louisville, Kentucky. Fred Erhart, architect, is an associate.

Jack C. Bergen has opened an architectural office in Room 22, Beers Building, 991 Broad Street, Bridgeport, Connecticut.

Geves George Kenny announces the removal of his architectural offices to 37 South Paint Street, Chillicothe, Ohio.

EUROPEAN HOUSING TOUR

A summer holiday tour has been arranged by the housing committee of the City Affairs Committee of New York in cooperation with the Garden Cities and Town Planning Association of London.

The tour will leave New York July 10. The itinerary includes London, the Shakespeare country, Manchester, Liverpool, Glasgow, Edinburgh, The Hague, Amsterdam, Cologne, Vienna, Lucerne, and Paris. The cruise will leave Havre August 22.

Arrangements have been made to study housing of all types in conjunction with general civic planning and development, health, parks, transportation, and decentralization. The party will be received by local authorities in each city and various enterprises will be visited under official guidance.

The tour is being organized on a straight cost basis and individual fares can be secured as low as $680. For further details, address Miss Helen Alfred, Chairman, City Affairs Committee of New York, 433 West 21st Street, New York City.

CHICAGO ARCHITECTURAL EXHIBITION

An exhibition of architecture and the allied arts will be held in the gallery of the Arts Club, 410 North Michigan Avenue, Chicago, from May 15 to June 6. The exhibition will be under the auspices of the Chicago Architectural Exhibition League, an organization controlled by a joint committee of nine architects representing the Chicago chapter of the American Institute of Architects, the Illinois Society of Architects and the Architectural Sketch Club of Chicago.

Drawings and small models of executed work, photographs, renderings, sculpture and allied arts crafts will be shown.

CALENDAR OF EVENTS AND COMPETITIONS

May 2	Exhibition of Modern Decoration and Design by members of AUDAC at Brooklyn Museum.
May 4-Aug. 8	Art Exhibition, Royal Academy, London (Burlington House).
May 9 Aug. 2	German Building Exhibition, in connection with International Town Planning and Housing Exhibition, Berlin.
May 15-June 6	Annual exhibition of the Chicago Architectural Exhibition League with the cooperation of the Arts Club of Chicago, Wrigley Building, Chicago.
Until May 29	Exhibition, Royal Society of Painters in Water Colours, London (5a, Pall Mall East).
May-August	Art Exhibition, Royal Scottish Academy, Edinburgh.
June 1-5	International Town Planning and Housing Federation Congress, Berlin.
June 10	Judgment of entries for Steel Bridge Competition. Address American Institute of Steel Construction, 200 Madison Ave., New York City.
July 5-Sept. 5	Summer course in Italian Architecture, Rome, Italy. Apply to Italian Tourist Information Office, 745 Fifth Avenue, New York City.
July 10-Aug. 30	Vacation-study tour of housing, arranged and directed by The Garden Cities and Town Planning Association, London, in cooperation with the City Affairs Committee, 112 East 19th Street, New York City. For information, address Helen Alfred, Housing Chairman.
October 1	Closing date for entries for Lincoln Arc Welding Prize competition. Address inquiries to the Lincoln Electric Company, Cleveland, Ohio.
November	Exposition of Indian Tribal Arts, Grand Central Art Galleries.
October-December	Art Exhibition, Royal Society of Painters in Water Colours, London (5a, Pall Mall East).
December 1	Closing date for entries in 1931 Better Homes in America Competition. Address c o American Institute of Architects, 1741 New York Ave., Washington, D. C.

BUILDING EXHIBITION, BERLIN

Special problems of housing and town planning will be stressed at the German Building Exhibition, which will be held from May 9 to August 2 in Berlin. In conjunction there will be an Industrial Town Planning and Housing Exhibition.

Some forty dwellings, full size, will be exhibited. They will illustrate typical sizes, public rooms, traffic rooms, sales rooms, all complete with interior furnishings.

Construction for agricultural needs, garages, new building methods and materials, will also be features of the exhibition.

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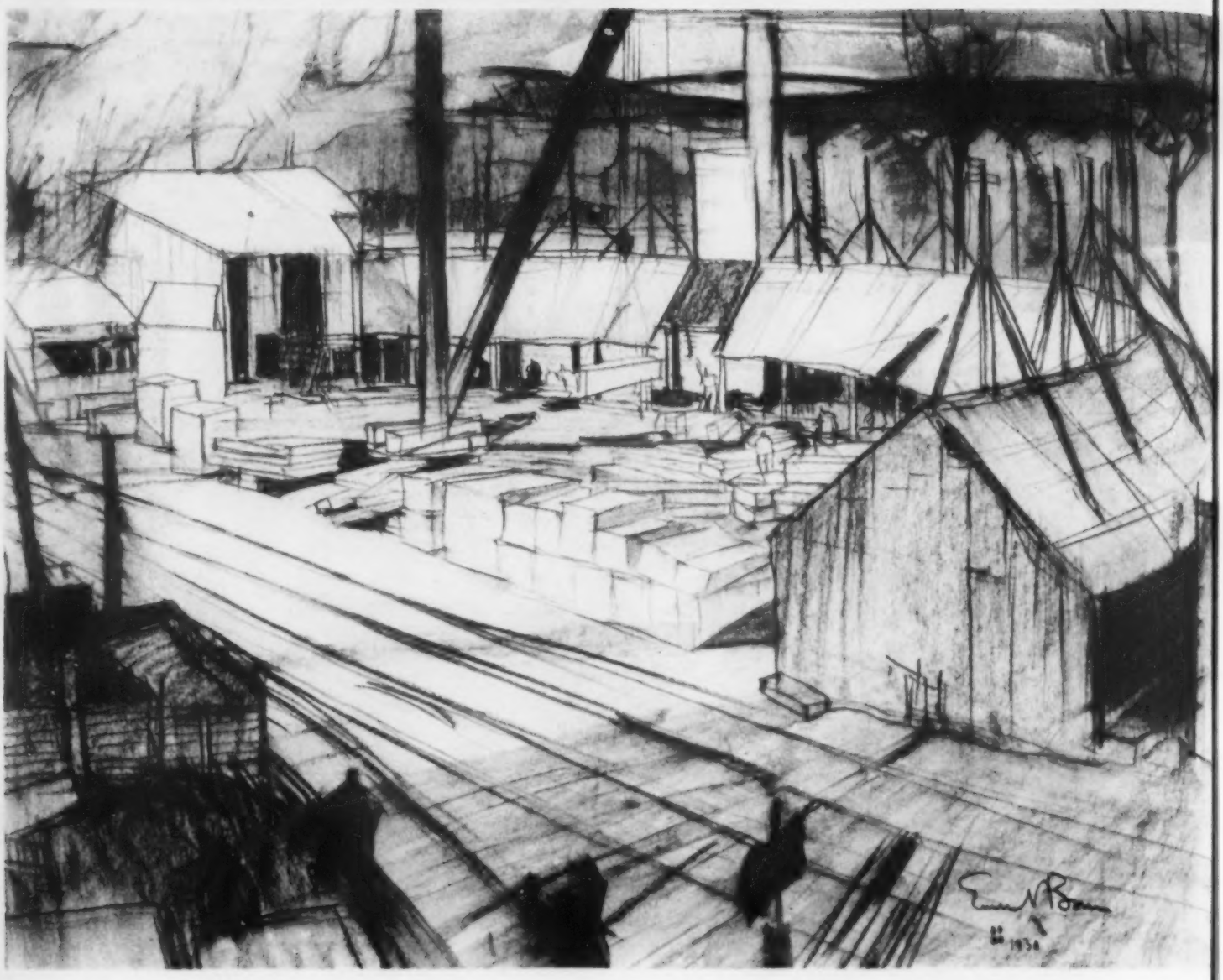

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Number Seven of a series of twelve drawings made at the Fletcher Quarries by Ernest Born.

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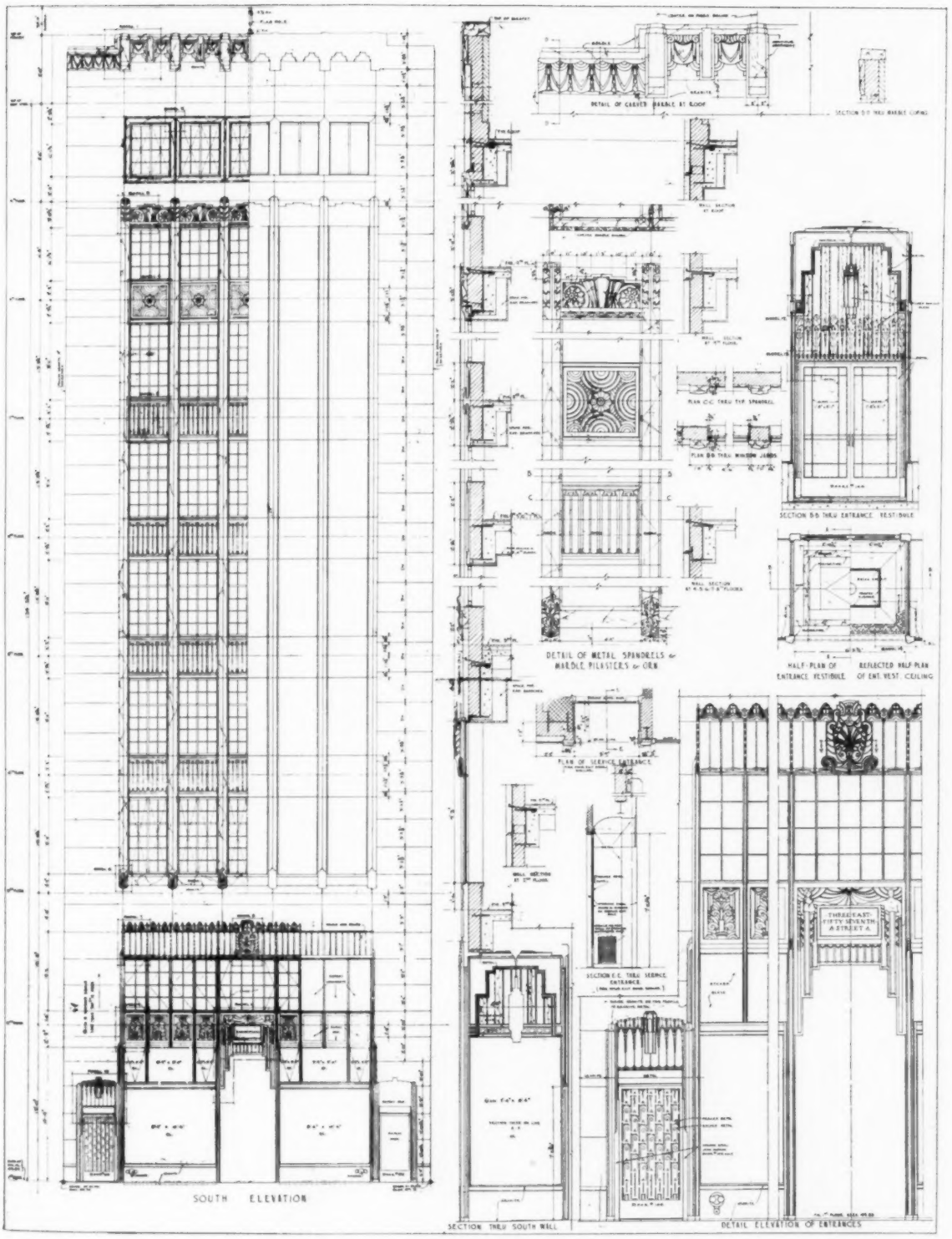
SOUTH ELEVATION
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SECTION B-B THRU ENTRANCE VESTIBULE
HALF PLAN OF ENTRANCE VESTIBULE
REFLECTED HALF PLAN OF ENT. VEST. CEILING
SECTION THRU SOUTH WALL
DETAIL ELEVATION OF ENTRANCES

WORKING DRAWING OF FACADE
L. P. HOLLANDER COMPANY BUILDING
3 EAST 57TH STREET, NEW YORK CITY
SHREVE, LAMB AND HARMON, ARCHITECTS

Fischer

L. P. HOLLANDER COMPANY BUILDING
3 EAST 57TH STREET, NEW YORK

Working details of facade
are illustrated on preceding page

SHREVE, LAMB AND HARMON
ARCHITECTS

THE ARCHITECTURAL RECORD

AN ILLUSTRATED MONTHLY MAGAZINE OF ARCHITECTURE & THE ALLIED ARTS & CRAFTS

VOLUME 69 MAY • 1931 NUMBER 5

L. P. HOLLANDER COMPANY BUILDING

NEW YORK CITY

SHREVE, LAMB AND HARMON, ARCHITECTS

The gold medal of the Fifth Avenue Association has recently been awarded to the architects for the design of this building. It was erected in 1930.

This building, comprising nine floors, was designed to serve as a women's specialty shop. It cost approximately $1,000,000, of which seven-tenths was expended for the facade and structure, and three-tenths for interior finish.

The architectural composition of the facade is a lower panel of rich metal work in aluminum for two stories, a shaft of vertical mullions of stone, and an upper panel framed horizontally but carrying the vertical motifs of the shaft. The whole and the various parts are framed in black granite.

The color scheme is silver, gray, and black—the silver of the aluminum metal, the gray of the limestone mullions and trim, and the black of the granite frame.

Originally show windows were intended for both first and second floors. The two small side doors—one a service entrance and the other a fire exit—have been designed as flanking motifs. These doors are ornamented grilles, metal plates with a pierced design for admission of light.

Because the building is a shop for women, the lower feature has been kept delicate and rich. The ornamental motifs are feminine in character and there is much suggestion of drapery. The models are the work of Maxfield Keck.

The interior floors and furnishings were designed by Jock D. Peters, collaborating with Eleanor LeMaire. Views and plans of these were illustrated in the January issue of THE RECORD.

The building was constructed by Starrett Brothers and Eken.

Fischer

L. P. HOLLANDER COMPANY BUILDING
3 EAST 57TH STREET, NEW YORK CITY
SHREVE, LAMB AND HARMON, ARCHITECTS

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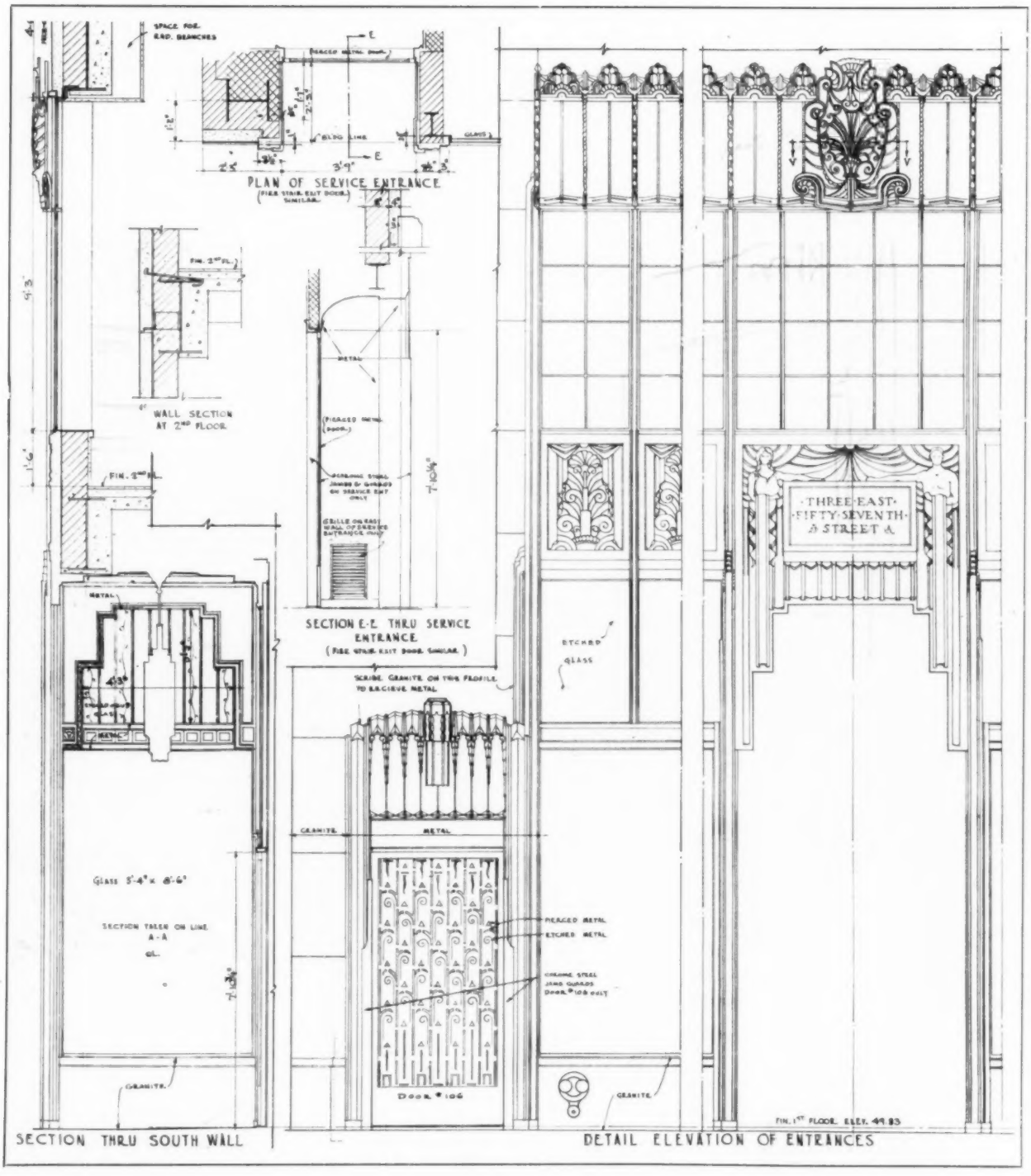
L. P. HOLLANDER COMPANY BUILDING
3 EAST 57TH STREET, NEW YORK CITY
SHREVE, LAMB AND HARMON, ARCHITECTS



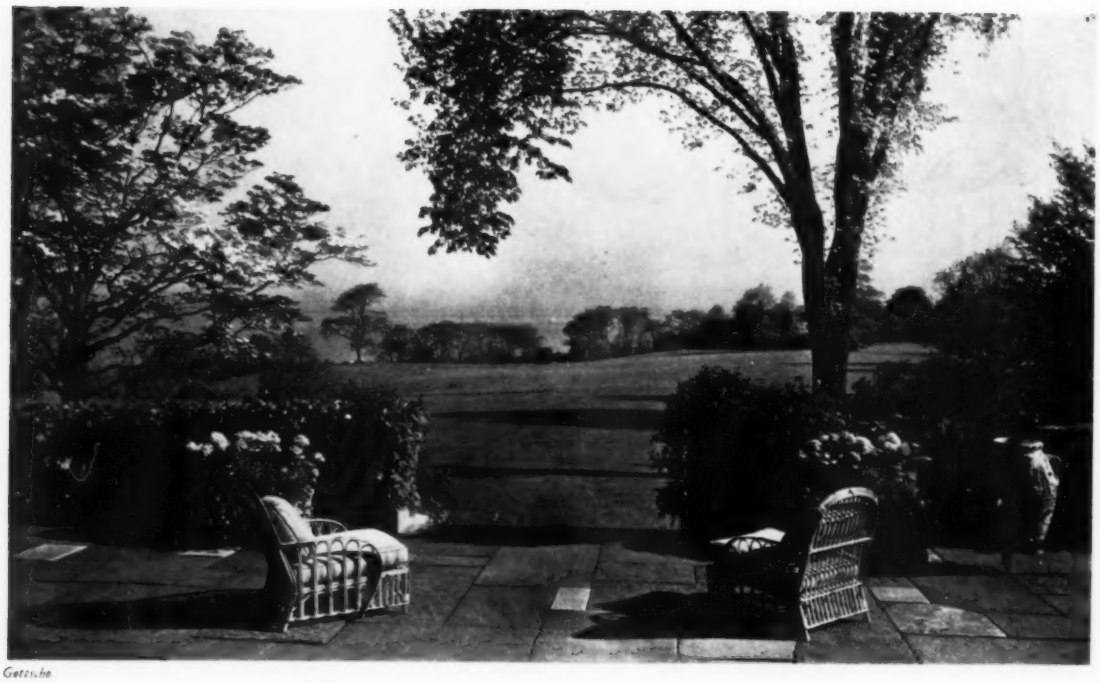
ENTRANCE DETAILS
L. P. HOLLANDER COMPANY BUILDING
3 EAST 57TH STREET, NEW YORK CITY
SHREVE, LAMB AND HARMON, ARCHITECTS

PORTFOLIO OF LANDSCAPE ARCHITECTURE

Gottscho

ESTATE OF J. E. ALDRED, GLEN COVE, LONG ISLAND
OLMSTED BROTHERS, LANDSCAPE ARCHITECTS
B. G. GOODHUE, ARCHITECT

THE WORK OF OLMSTED BROTHERS AND SELECTIONS FROM THE 1931 EXHIBITION THE NEW YORK CHAPTER AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS



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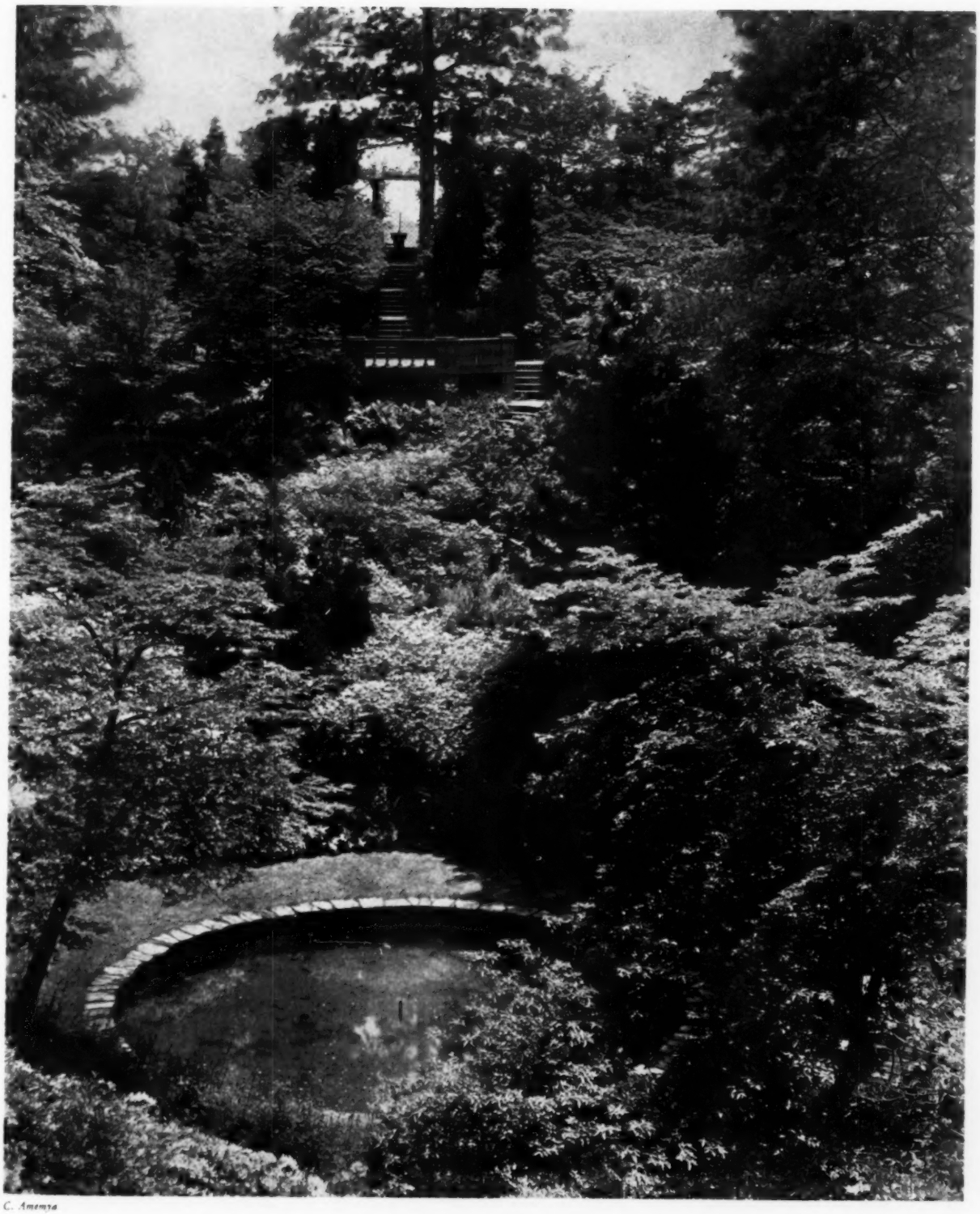
ESTATE OF J. E. ALDRED, GLEN COVE, LONG ISLAND
OLMSTED BROTHERS, LANDSCAPE ARCHITECTS

TERRACE OF PENNSYLVANIA ESTATE
JACOB JOHN SPOON, LANDSCAPE ARCHITECT



C. Ames

VALLEY POOL AND STAIRS TO ROSE GARDEN ON UPPER LEVEL
ESTATE OF WALTER JENNINGS, COLD SPRING HARBOR, LONG ISLAND
OLMSTED BROTHERS, LANDSCAPE ARCHITECTS

Gottscho

VIEW OF HOUSE FROM FLOWER GARDEN
ESTATE OF S. T. CALLAWAY, RYE, NEW YORK
ROBERT LUDLOW FOWLER, JR., LANDSCAPE ARCHITECT

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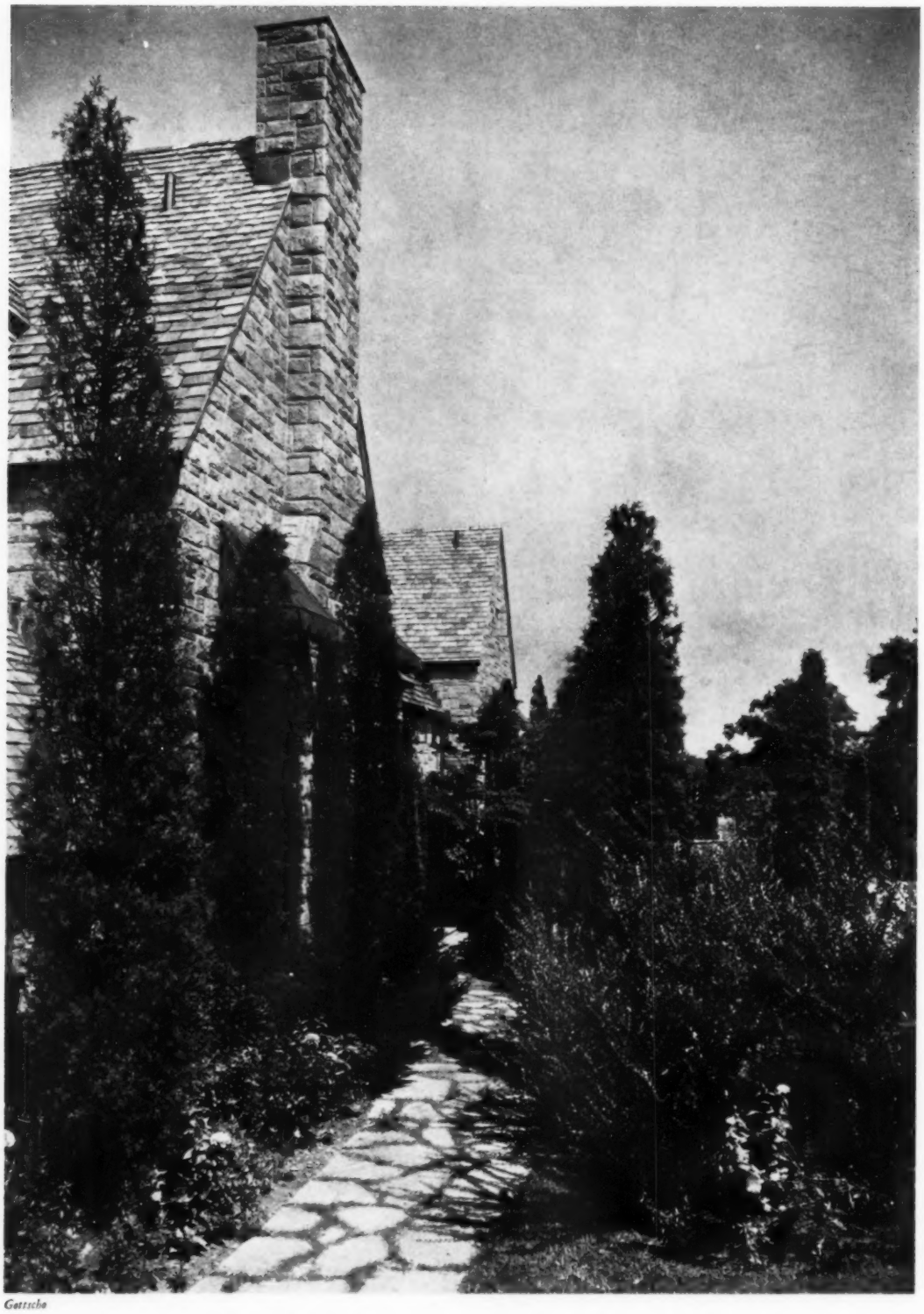
FLOWER BORDER, ESTATE OF S. T. CALLAWAY, RYE, NEW YORK
ROBERT LUDLOW FOWLER, JR., LANDSCAPE ARCHITECT
HEATHCOTE WOOLSEY, ARCHITECT

"MARY'S GARDEN" IN PLAYLAND
WESTCHESTER COUNTY PARK SYSTEM, NEW YORK
GILMORE D. CLARKE, LANDSCAPE ARCHITECT

VISTA TOWARD HOUSE TERRACE
GARDEN OF FRANK E. BARBOUR, CANAJOHARIE, NEW YORK
HELEN SWIFT JONES, LANDSCAPE ARCHITECT



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ESTATE OF THEODORE KIENDL, BRONXVILLE, NEW YORK
ROBERT LUDLOW FOWLER, JR., LANDSCAPE ARCHITECT

Van Anda

A REMODELED HOUSE ON LONG ISLAND

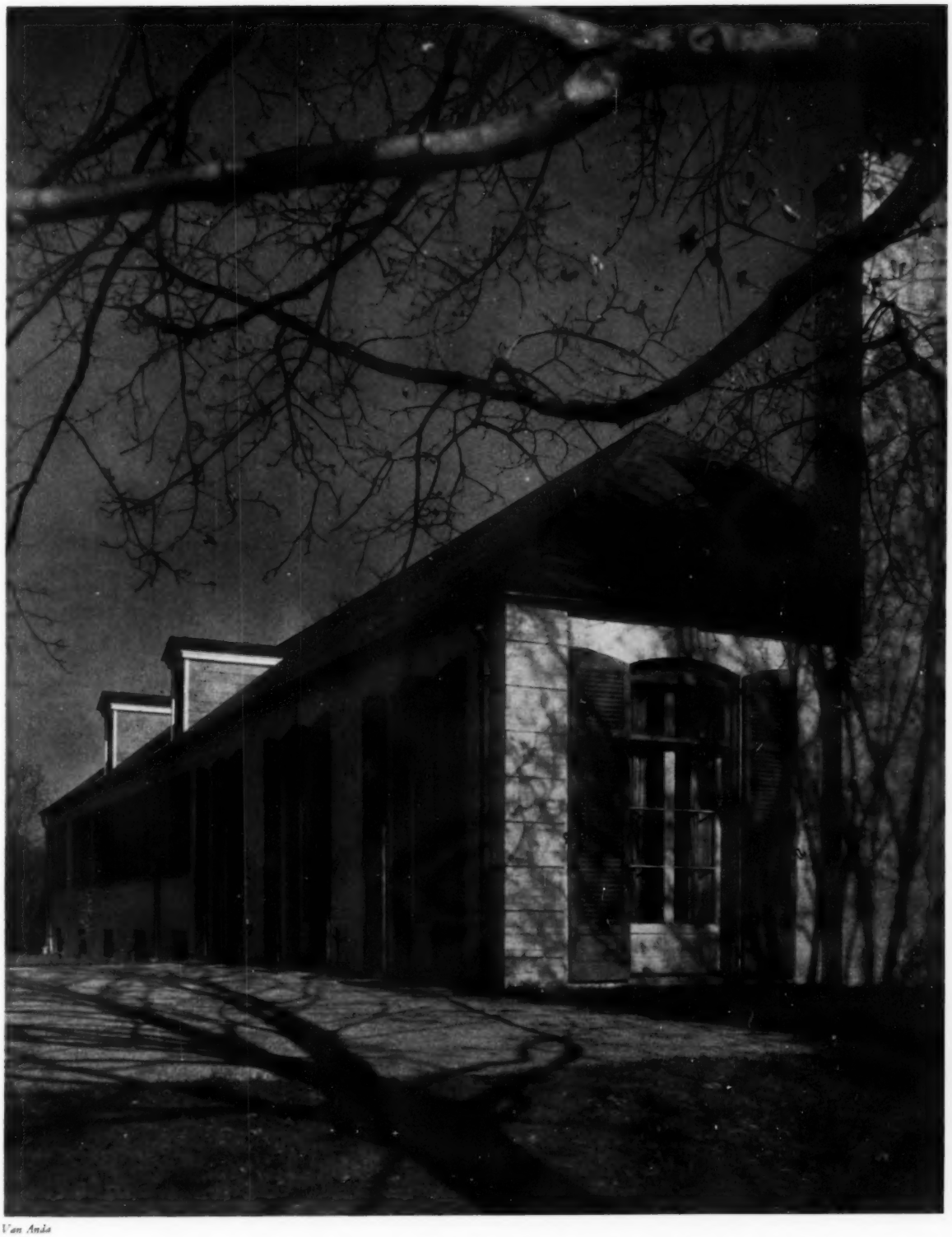
RODGERS AND POOR, ARCHITECTS

This whitewashed brick Regency house for Morgan W. Jopling at Smithtown, Long Island, began in 1890 as a fishing and hunting club. As each of the original twelve members died, his share was bought by the remaining members until the club finally ceased to exit. The clubhouse was unoccupied for nearly ten years until in 1928 Mr. Jopling, president, MacArthur Concrete Pile Corporation, saw its potentialities and bought it for alteration into a residence.

The old clubhouse was a low rambling shingle structure surrounded by a porch with trimmed tree trunks for columns. When stripped of incrustations, the long low wing suggested the architecture of the French countryside. A wall surface of brick was desired. This requirement was met by veneering the brick on the existing wall. The brick was laid on edge, not flat, in order to save money, and whitewashed. The living room became a room 30′ x 40′; the floor was dropped four steps below the rest of the first floor. The roof lines of the main block and the wing were untouched but both roofs were slated and a wood parapet added to the main house. The front door motif was added; also the storeroom. Tall French doors were placed in the living room and the dining room opening out on the terrace. New dormers were placed on the wing and the interior partitions were changed.

Van Anda

HOUSE OF MORGAN W. JOPLING, SMITHTOWN, LONG ISLAND
ROBERT PERRY RODGERS AND ALFRED EASTON POOR, ARCHITECTS



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HOUSE OF MORGAN W. JOPLING, SMITHTOWN, LONG ISLAND
ROBERT PERRY RODGERS AND ALFRED EASTON POOR, ARCHITECTS

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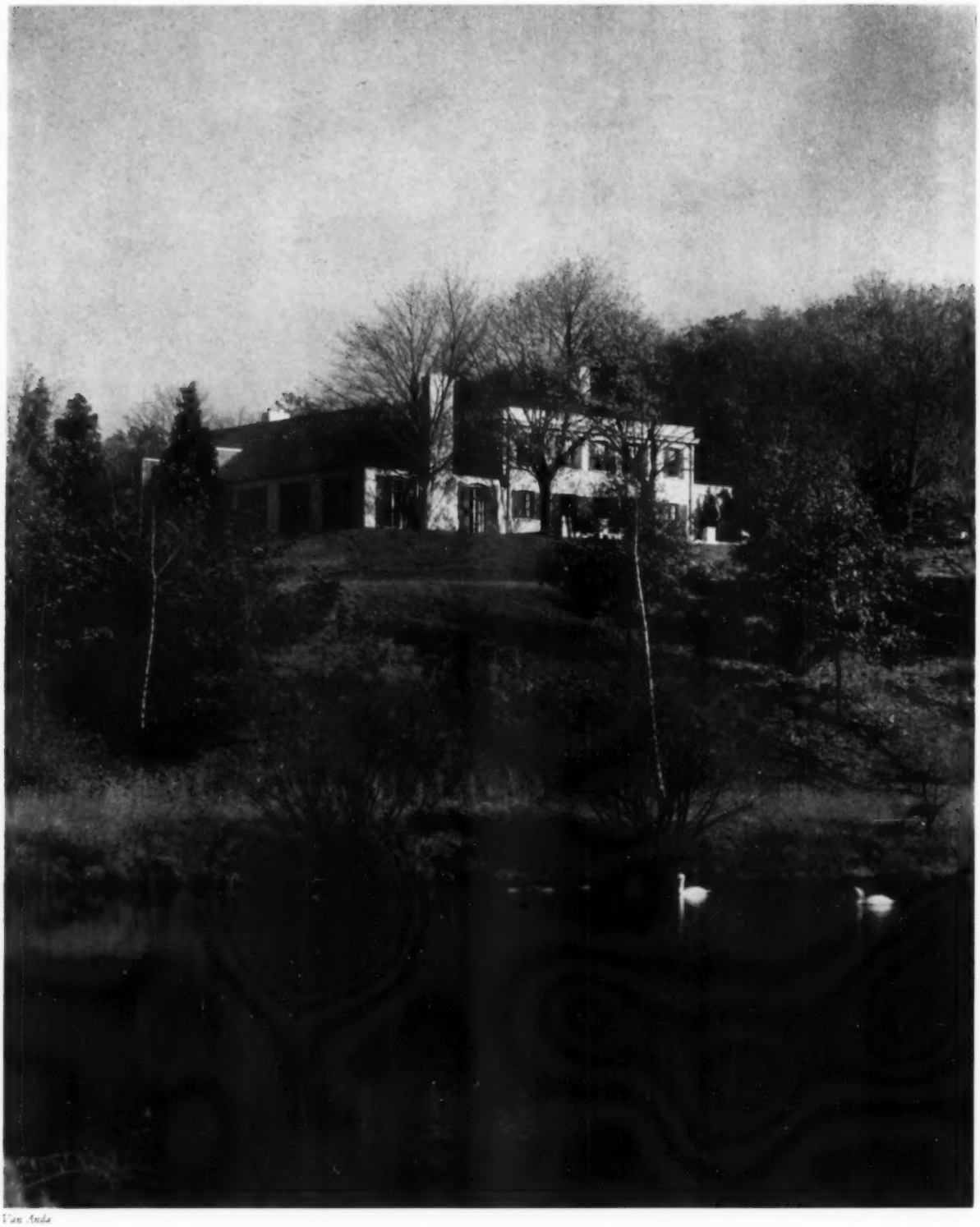
ROBERT PERRY RODGERS AND ALFRED EASTON POOR, ARCHITECTS



Van Anda

HOUSE OF MORGAN W. JOPLING, SMITHTOWN, LONG ISLAND
ROBERT PERRY RODGERS AND ALFRED EASTON POOR, ARCHITECTS

Nyholm and Lincoln

A BRANCH BANK IN NEW YORK CITY

EUGENE SCHOEN, ARCHITECT

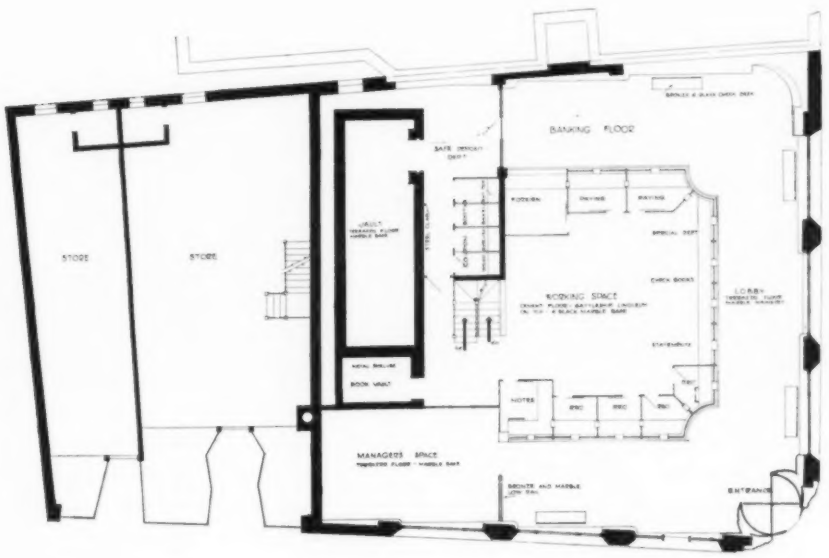
The Bronx branch office of the Public National Bank and Trust Company of New York, recently completed, occupies a plot 62 by 62 feet, and rises to a height of 30 feet. The windows reach nearly to the 25-foot ceiling and afford ample light. The facade is Indiana limestone with a polished granite base. The bronze entrance is in bas-relief.

The architect's treatment of the interior affords many conveniences contributing to banking efficiency. The tellers' cages and working space occupy the center portion of the banking room and are surrounded on three sides by a lobby 12 feet wide. Quarters for the officials are located in the back of the banking room with access from the Claremont Parkway side. The safe deposit vaults occupy the remaining space on the north side. Above the vaults is a mezzanine floor furnishing additional working space. Silver storage vaults are located in the cellar.

The walls of the banking room are plaster with a wainscot of Botticino marble 4 feet 6 inches high. The screen surrounding the tellers' space is of the same marble with a horizontal band of Belgian black marble at the counter level. The cornice of the screen consists of flat bakelite with two horizontal bronze moldings. The space between the cornice and the ledge is made up of bronze pilaster, grilles and glass. In the center of the ceiling is a skylight which has a ground glass ceiling light measuring 14 by 35 feet. Terrazzo with a border of Belgian black marble is used for the floors.

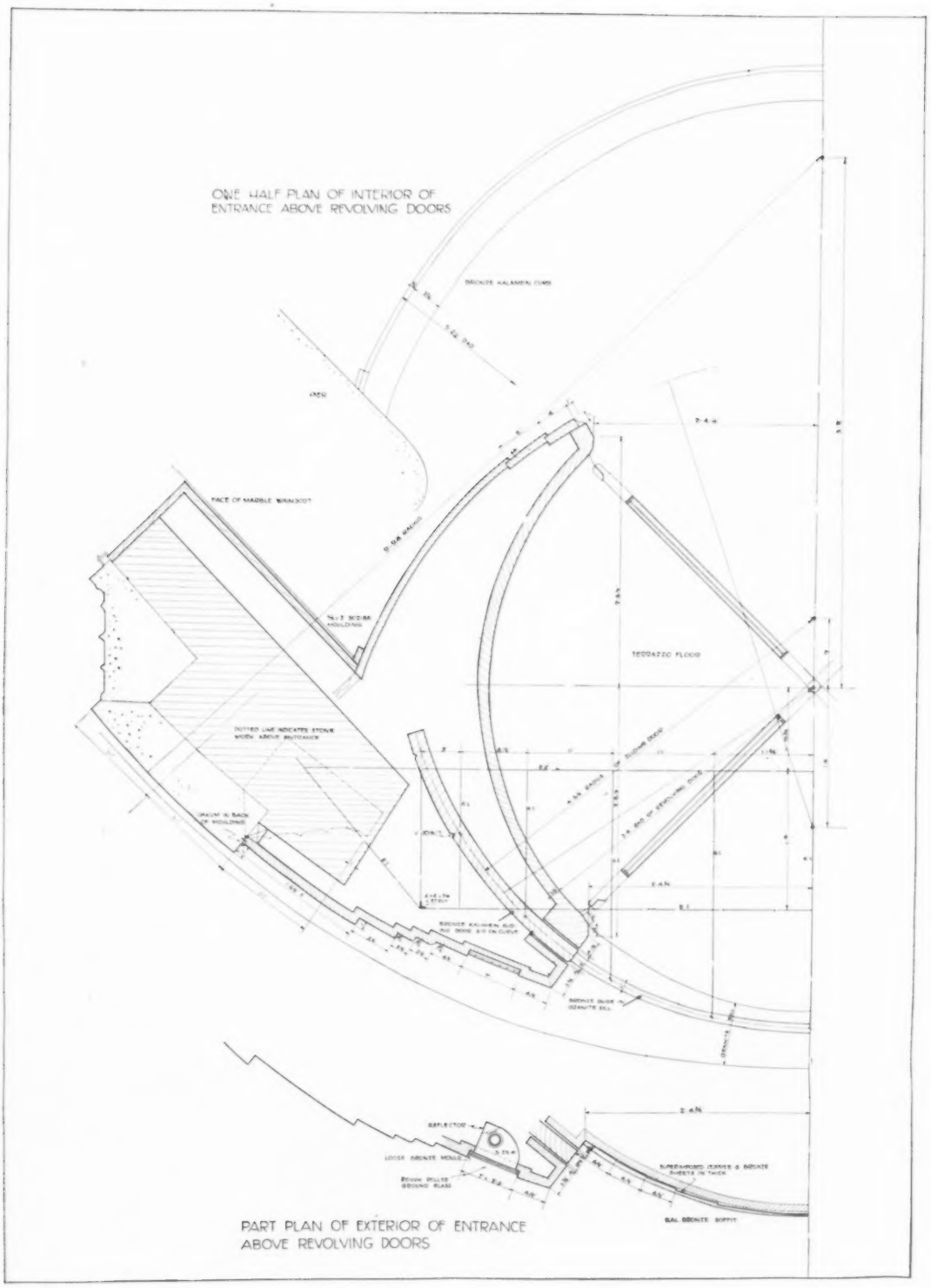
Nyholm and Lincoln

THE PUBLIC NATIONAL BANK AND TRUST COMPANY
BRONX BRANCH, NEW YORK
EUGENE SCHOEN, ARCHITECT



Nyholm and Lincoln

THE PUBLIC NATIONAL BANK AND TRUST COMPANY
BRONX BRANCH, NEW YORK
EUGENE SCHOEN, ARCHITECT


ONE HALF PLAN OF INTERIOR OF
ENTRANCE ABOVE REVOLVING DOORS
FACE OF MARBLE WAINSCOT
TERRAZZO FLOOR
PART PLAN OF EXTERIOR OF ENTRANCE
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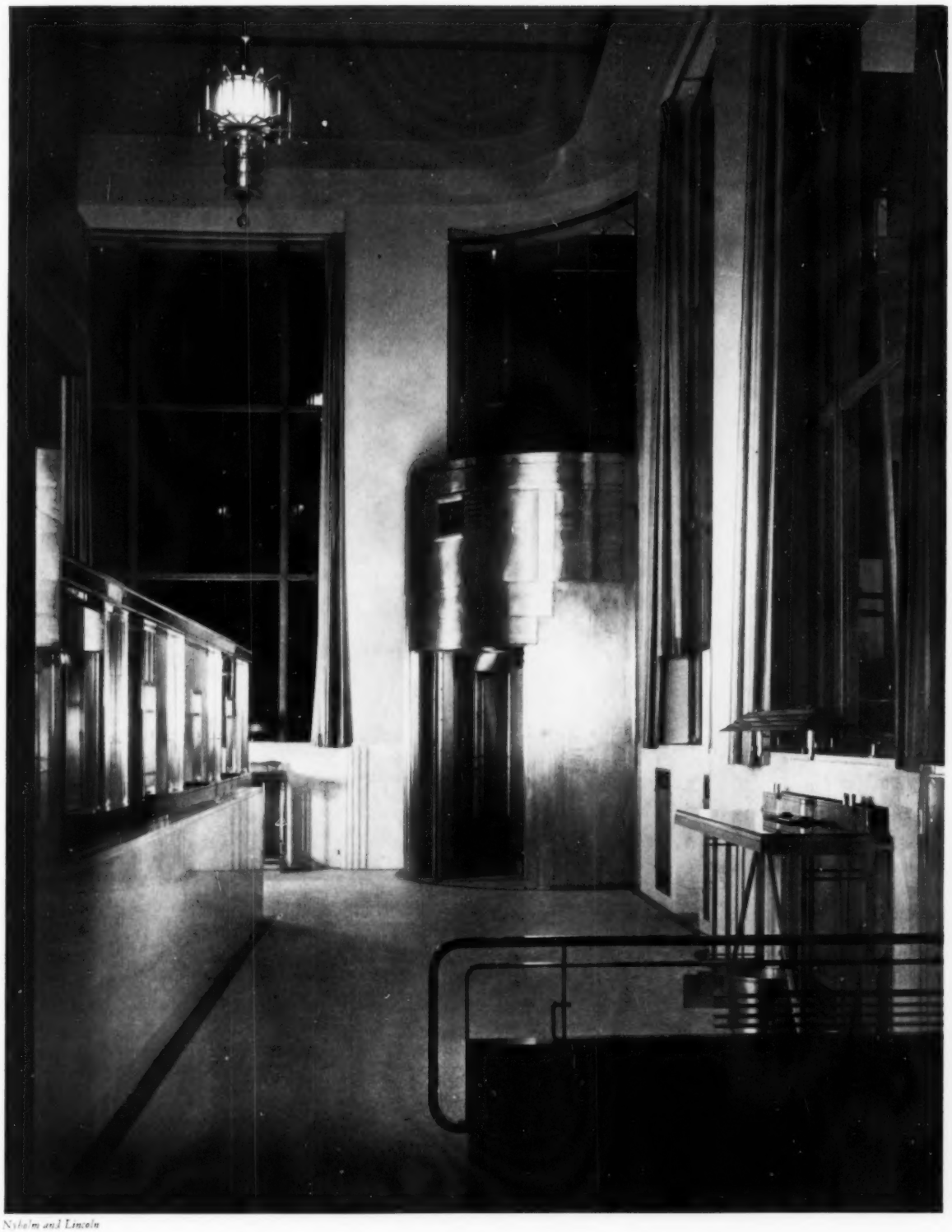
THE PUBLIC NATIONAL BANK AND TRUST COMPANY
BRONX BRANCH, NEW YORK
EUGENE SCHOEN, ARCHITECT



Nyholm and Lincoln

THE PUBLIC NATIONAL BANK AND TRUST COMPANY
BRONX BRANCH, NEW YORK
EUGENE SCHOEN, ARCHITECT

Nyholm and Lincoln

THE PUBLIC NATIONAL BANK AND TRUST COMPANY
BRONX BRANCH, NEW YORK
EUGENE SCHOEN, ARCHITECT

PORTFOLIO OF CURRENT ARCHITECTURE

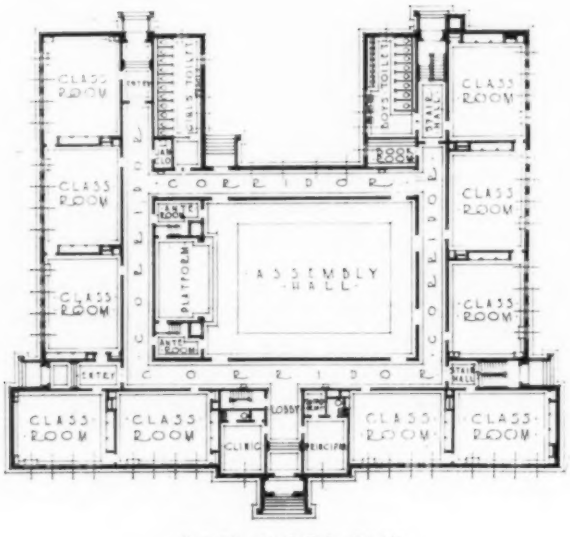
Weber

WEST FRONT OF ELEMENTARY SCHOOL, NORWOOD, MASSACHUSETTS
McLAUGHLIN AND BURR, ARCHITECTS

ELEMENTARY SCHOOLS
HIGH SCHOOLS
AND
A COUNTRY DAY SCHOOL

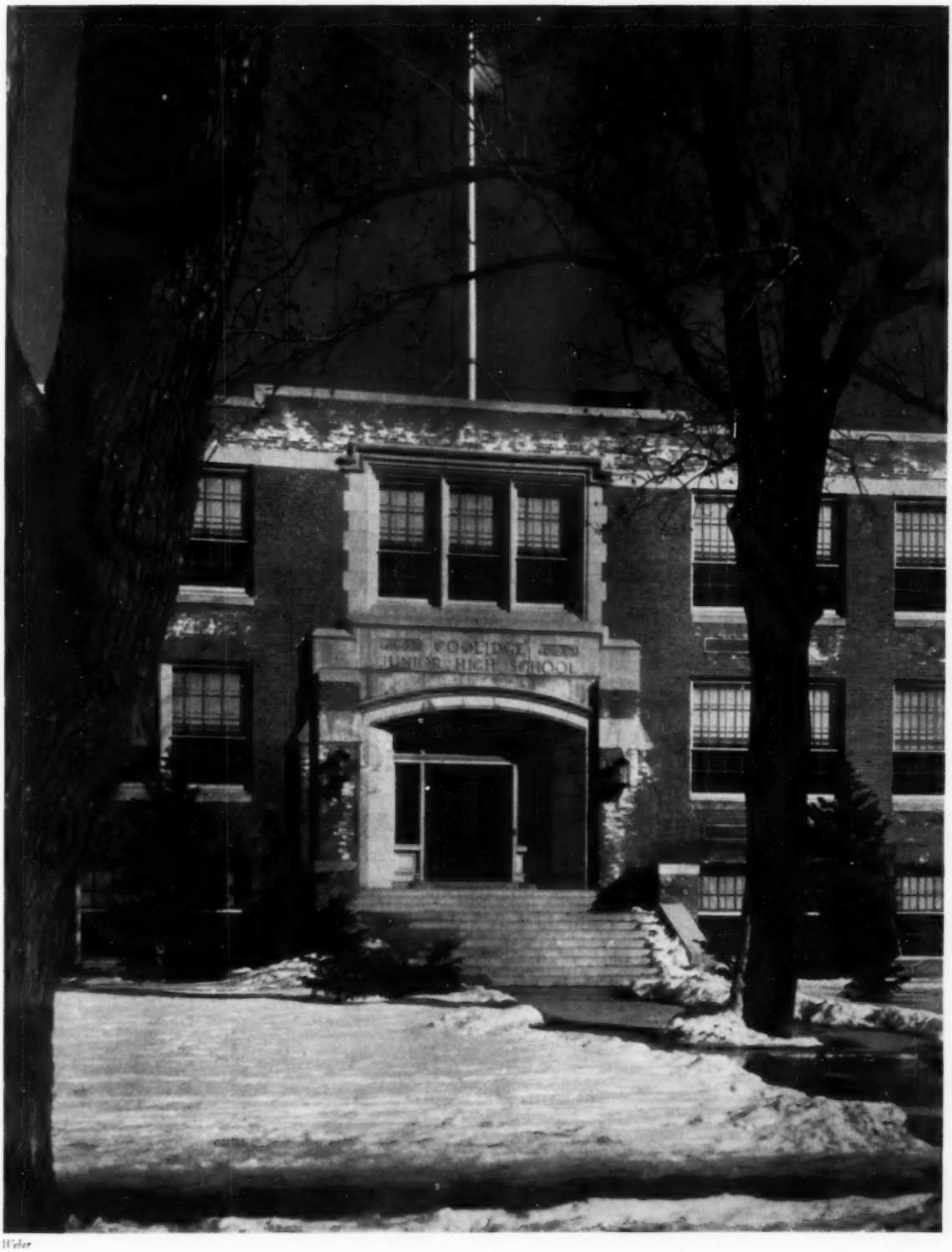
Weber

ASSEMBLY HALL OF ELEMENTARY SCHOOL, NORWOOD, MASSACHUSETTS
McLAUGHLIN AND BURR, ARCHITECTS



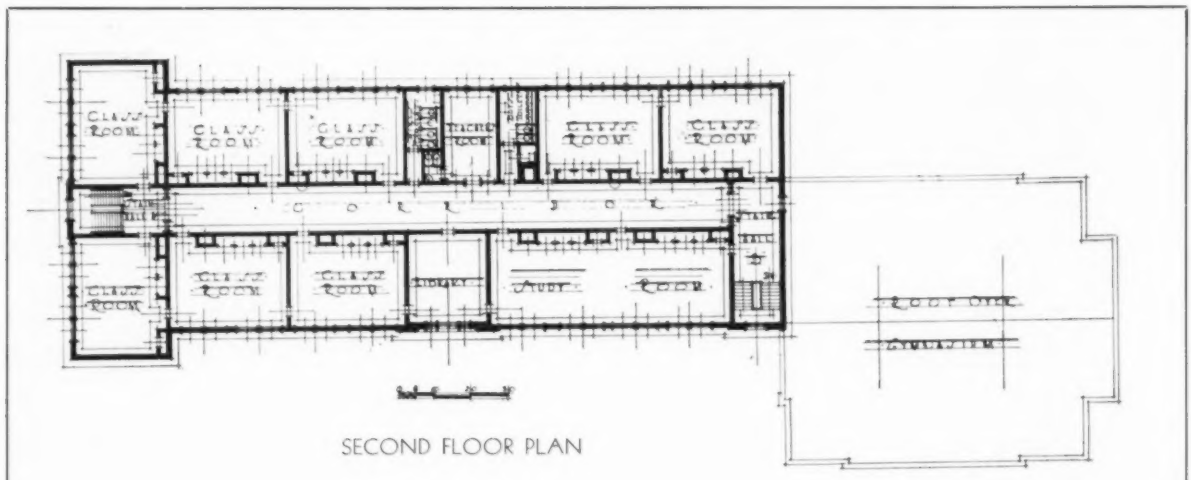
FIRST FLOOR PLAN

BASEMENT PLAN

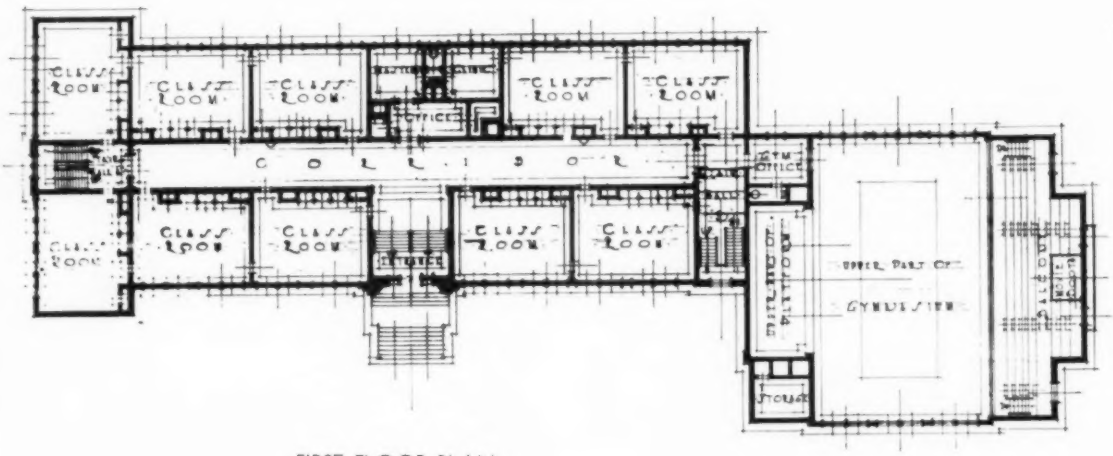


Weber

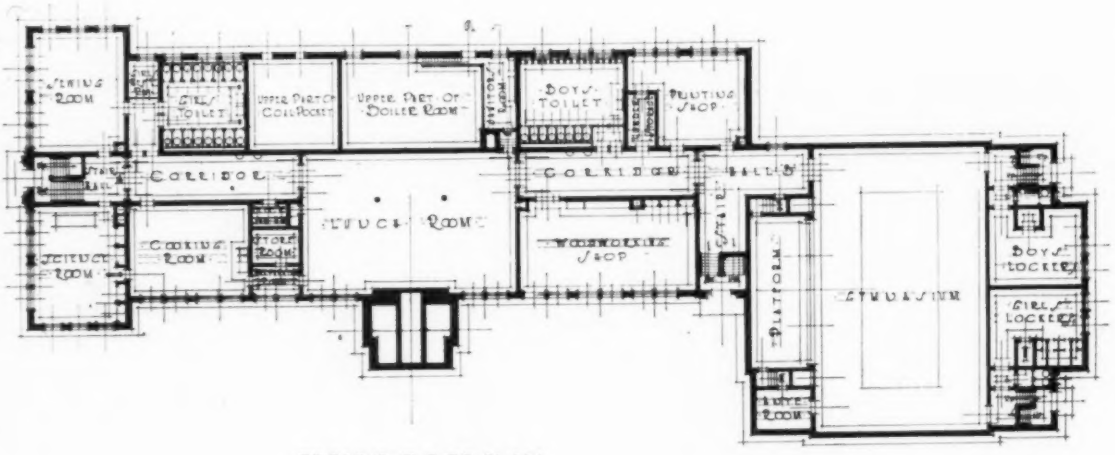
COOLIDGE JUNIOR HIGH SCHOOL, NATICK, MASSACHUSETTS
McLAUGHLIN AND BURR, ARCHITECTS



SECOND FLOOR PLAN



FIRST FLOOR PLAN



GROUND FLOOR PLAN

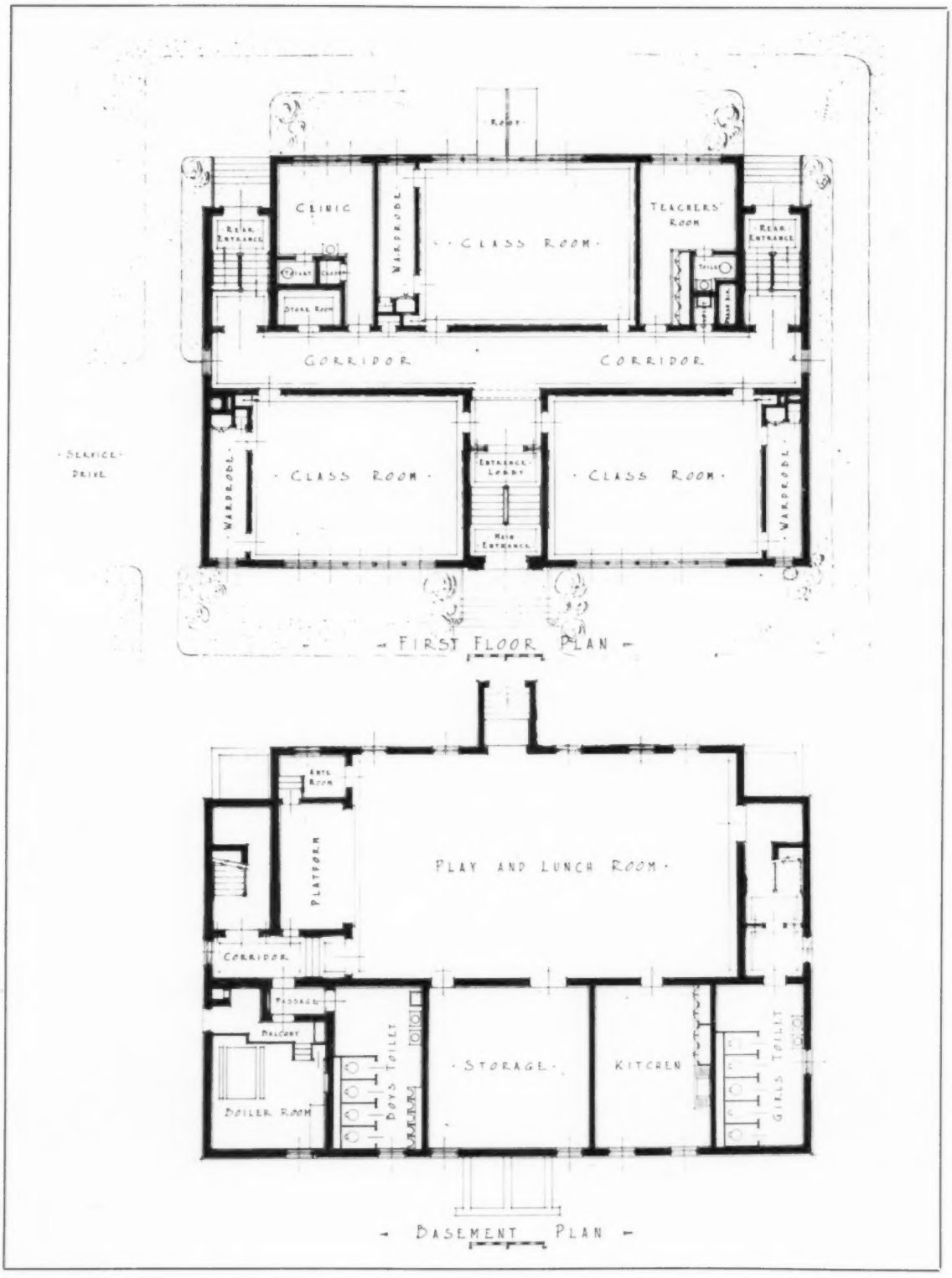
COOLIDGE JUNIOR HIGH SCHOOL, NATICK, MASSACHUSETTS
McLAUGHLIN AND BURR, ARCHITECTS

Weber

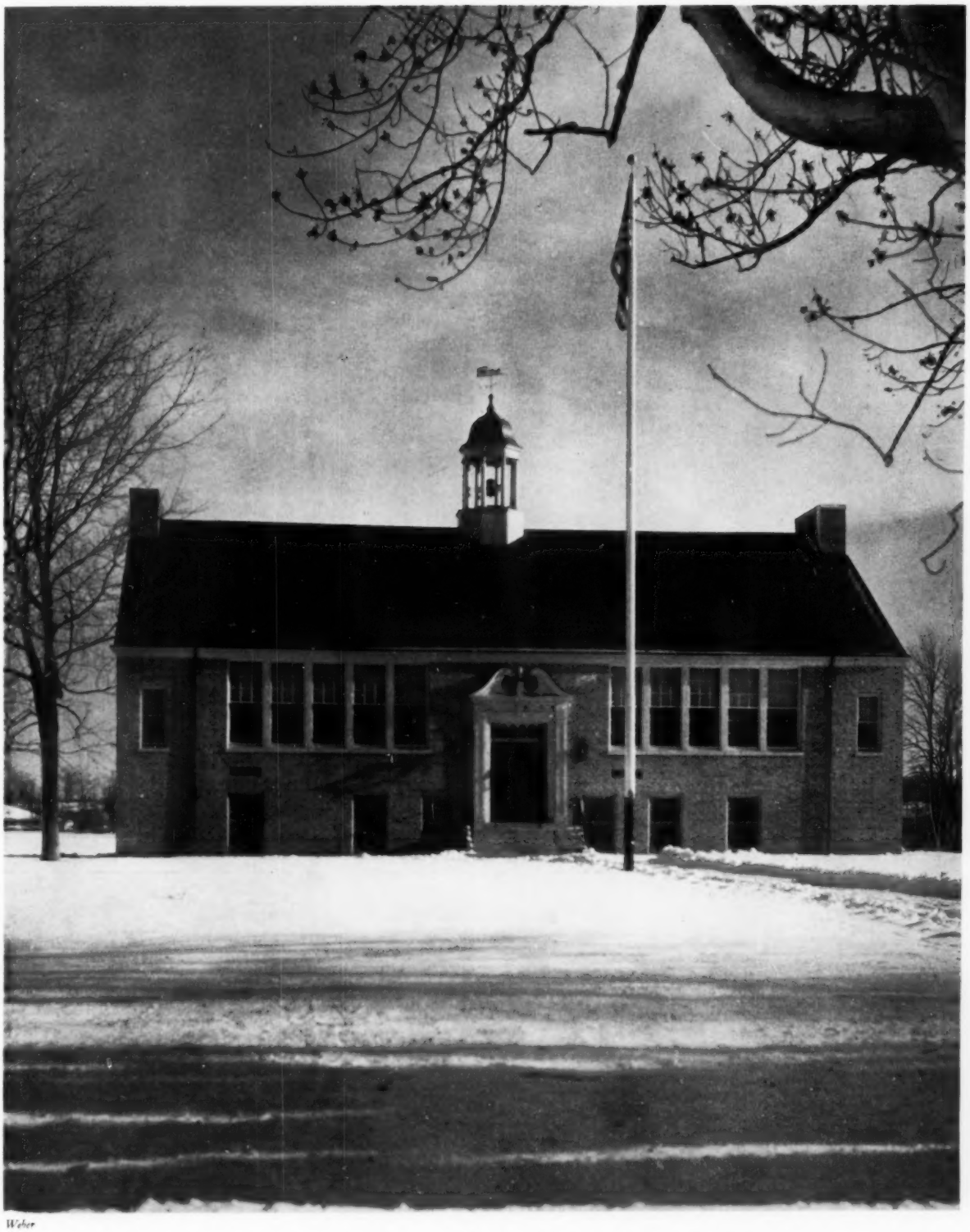
COOLIDGE JUNIOR HIGH SCHOOL, NATICK, MASSACHUSETTS
McLAUGHLIN AND BURR, ARCHITECTS

Weber

ELEMENTARY SCHOOL, SOUTH WALPOLE, MASSACHUSETTS
McLAUGHLIN AND BURR, ARCHITECTS



ELEMENTARY SCHOOL, SOUTH WALPOLE, MASSACHUSETTS
McLAUGHLIN AND BURR, ARCHITECTS



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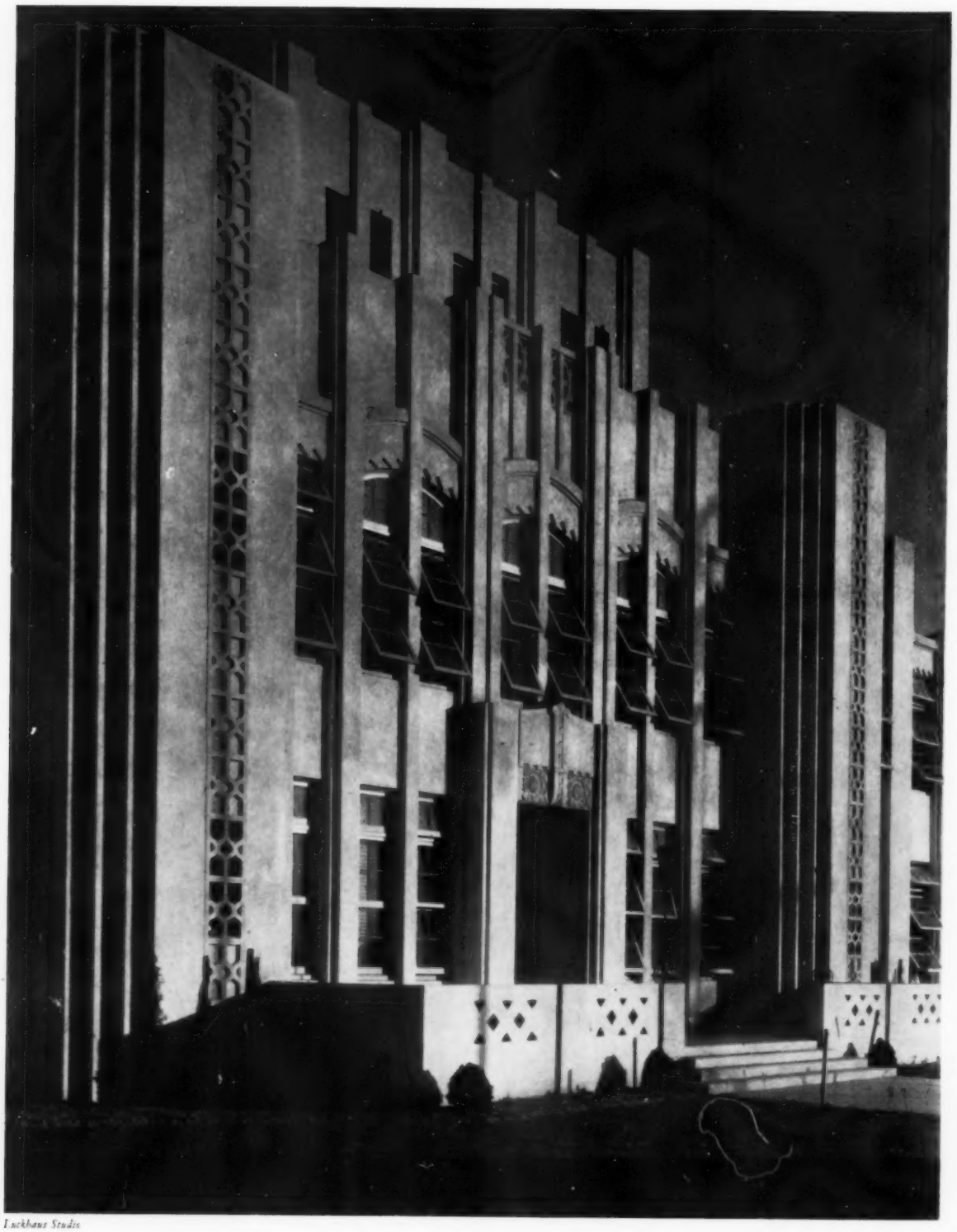
ELEMENTARY SCHOOL, SOUTH WALPOLE, MASSACHUSETTS
McLAUGHLIN AND BURR, ARCHITECTS

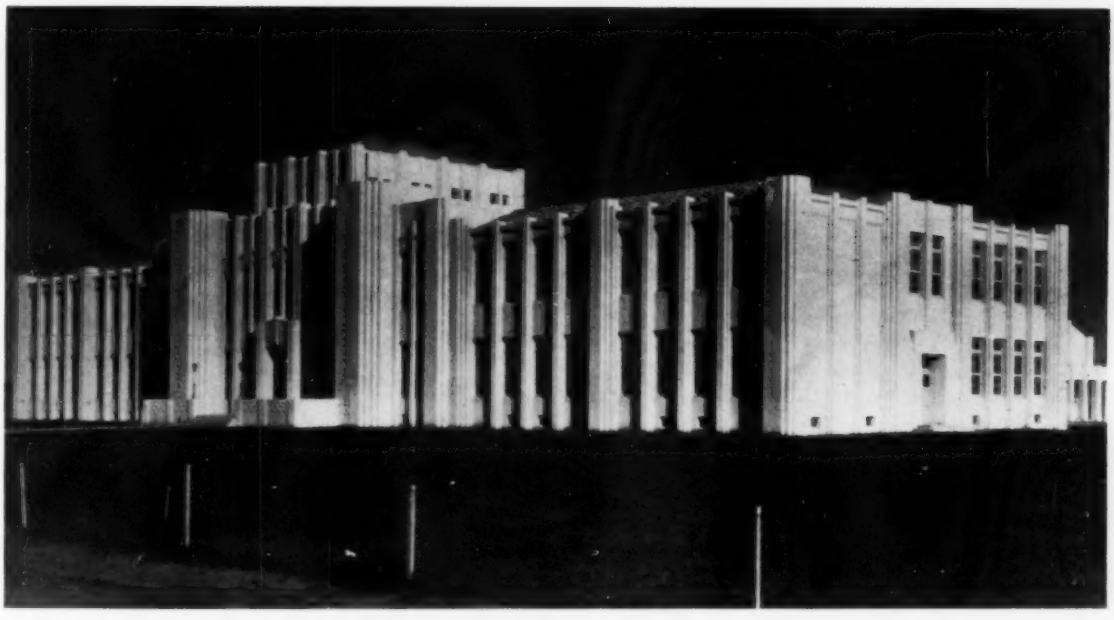


Luckhaus Studio

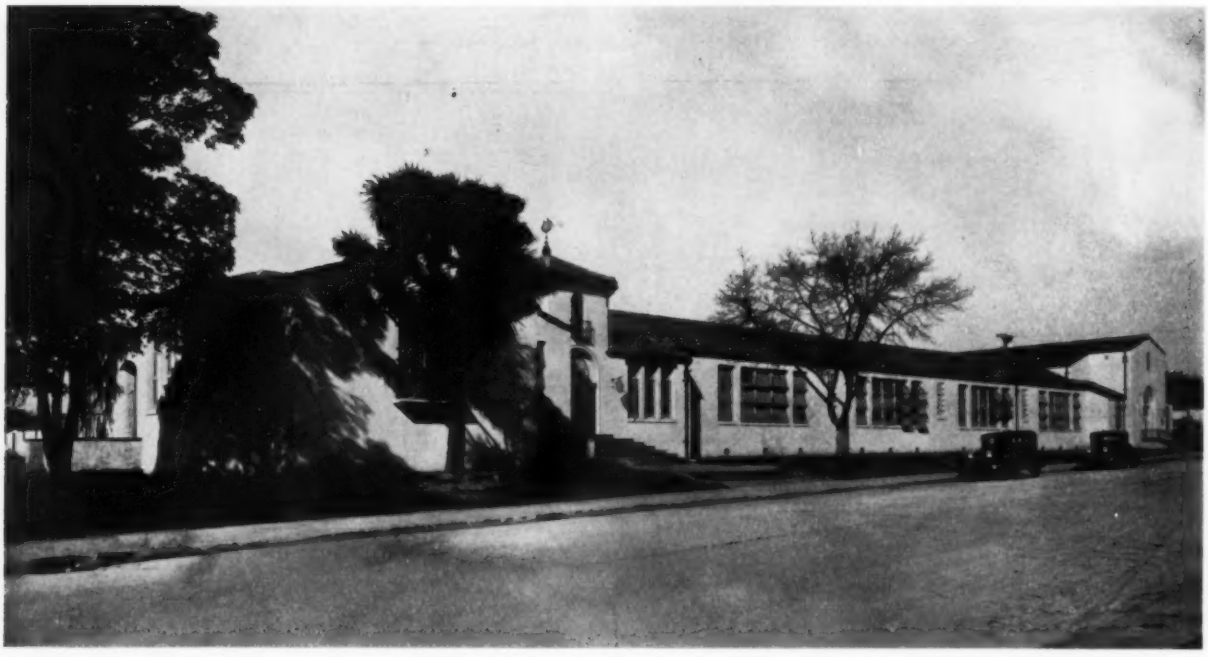
FRONT ENTRANCE DETAIL
JUNIOR HIGH SCHOOL, LYNWOOD, CALIFORNIA
MARSH, SMITH AND POWELL, ARCHITECTS

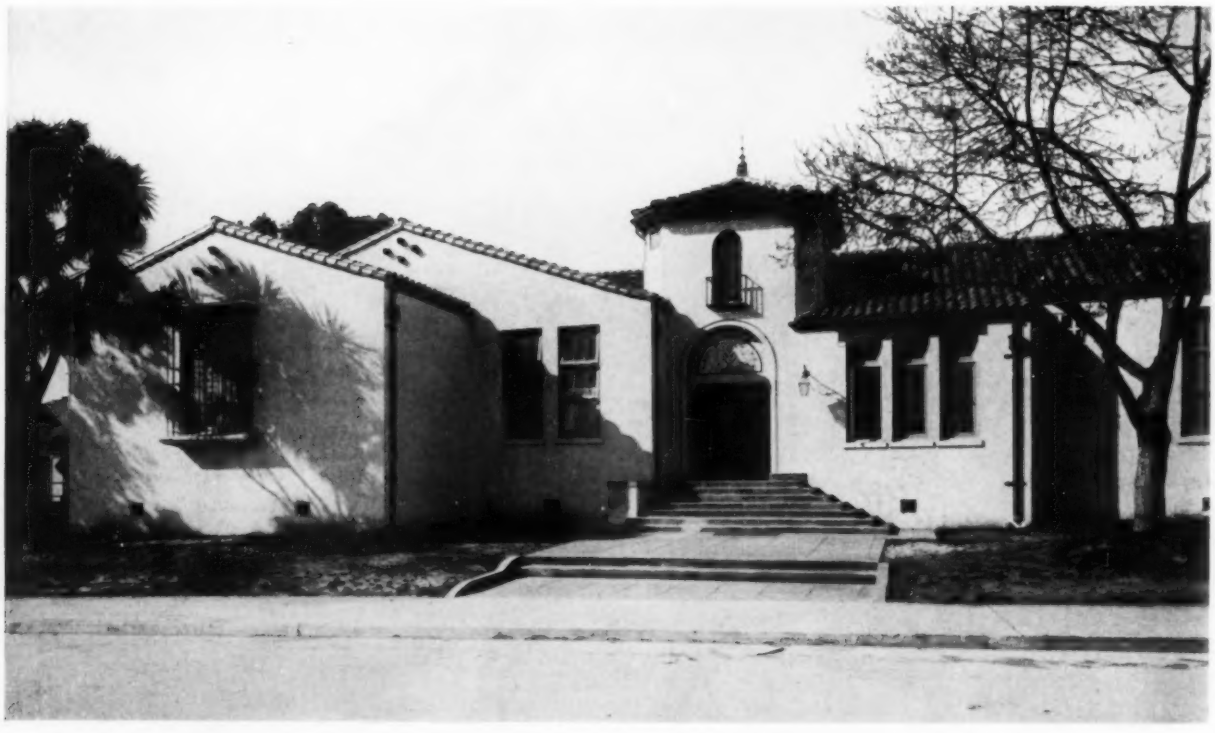
Luckhaus Studio

ELEMENTARY SCHOOL, SIERRA MADRE, CALIFORNIA
MARSH, SMITH AND POWELL, ARCHITECTS

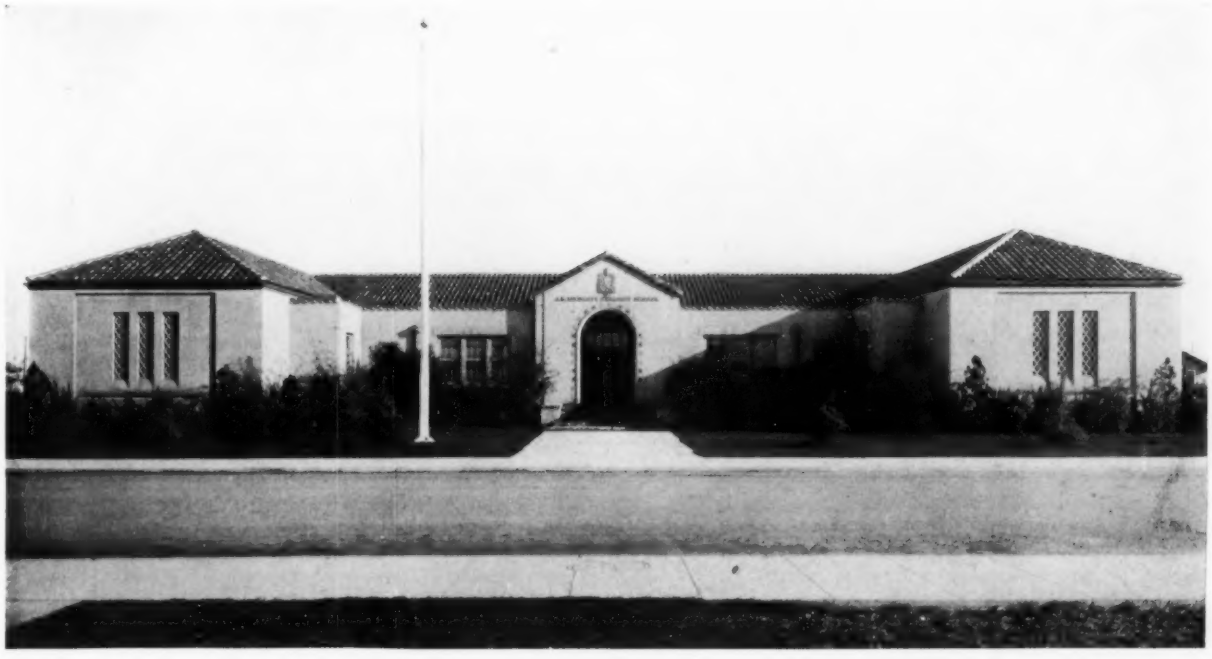


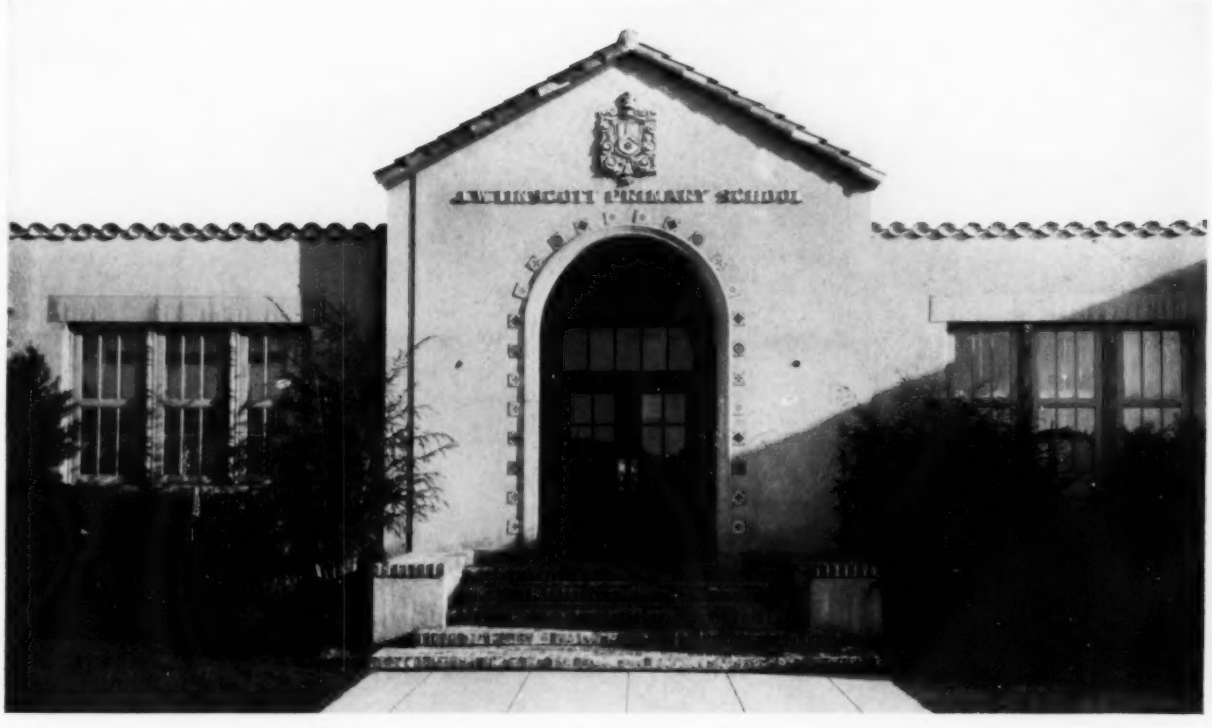
JUNIOR HIGH SCHOOL, LYNWOOD, CALIFORNIA
MARSH, SMITH AND POWELL, ARCHITECTS



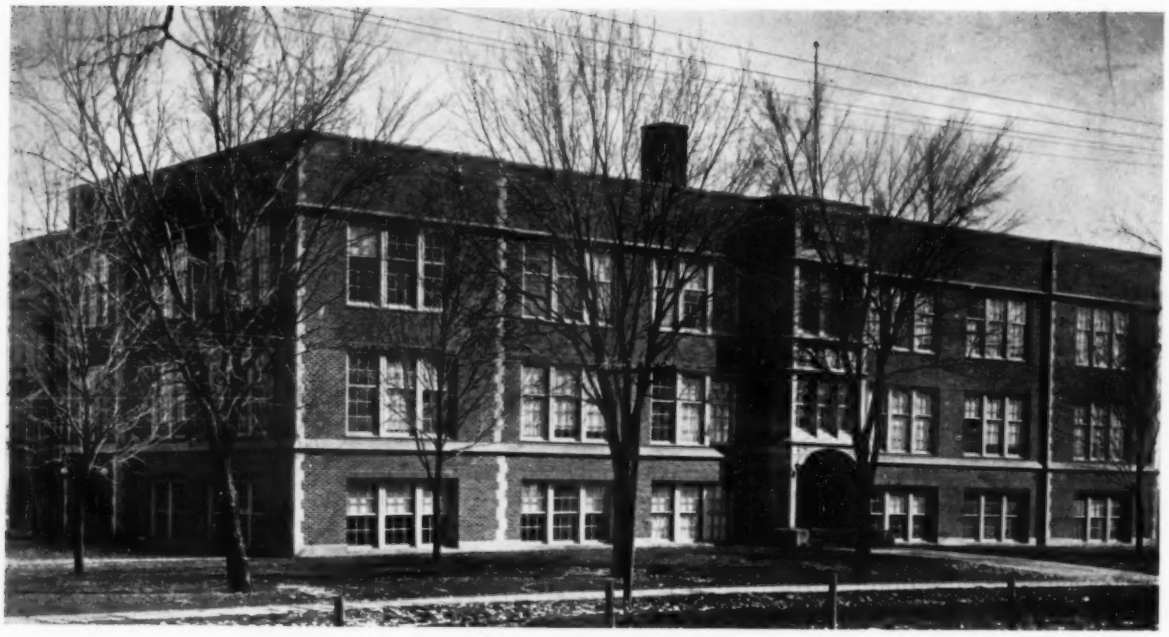


LAUREL STREET PRIMARY SCHOOL, SANTA CRUZ, CALIFORNIA
WILLIAM H. WEEKS, ARCHITECT





LINSCOTT PRIMARY SCHOOL, WATSONVILLE, CALIFORNIA
WILLIAM H. WEEKS, ARCHITECT



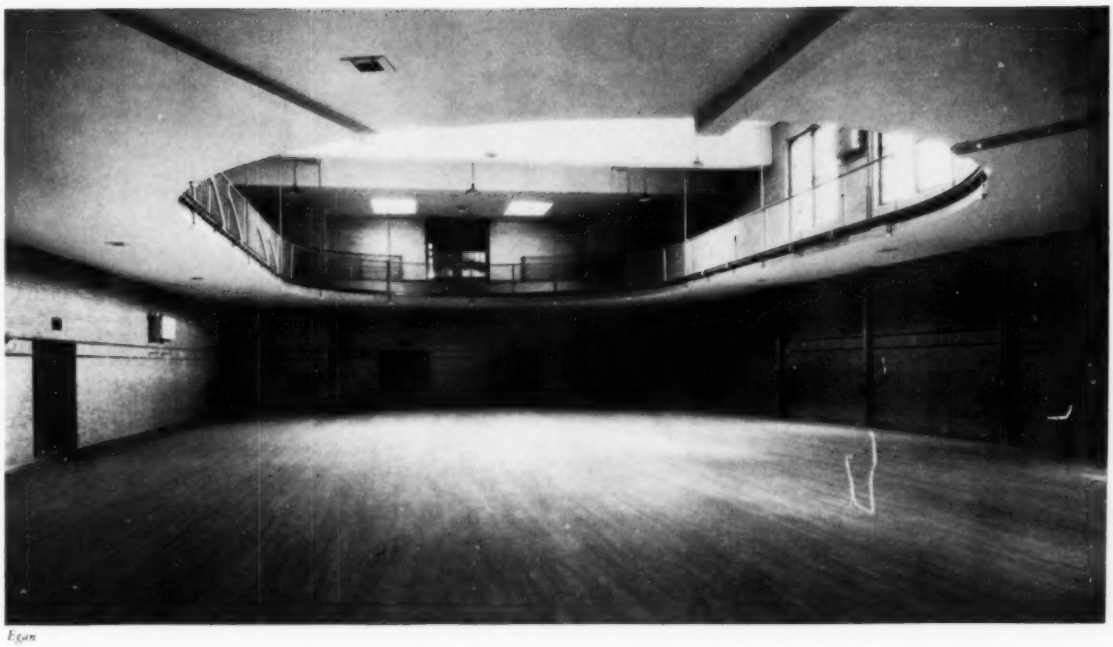
Cost: $125,000. Seven recitation rooms; laboratories, gymnasium and auditorium.

TOWNSHIP HIGH SCHOOL, TOULON, ILLINOIS
HEWITT, EMERSON AND GREGG, ARCHITECTS

Egan

The building houses a girls' senior high school, a boys' senior high school, a branch public library, a ward room and a precinct voting place.

MEMORIAL HIGH SCHOOL, ROXBURY, MASSACHUSETTS
HARRISON H. ATWOOD, ARCHITECT



Egan

The boys' gymnasium is used also as a drill hall. Running track can accommodate 120 spectators.

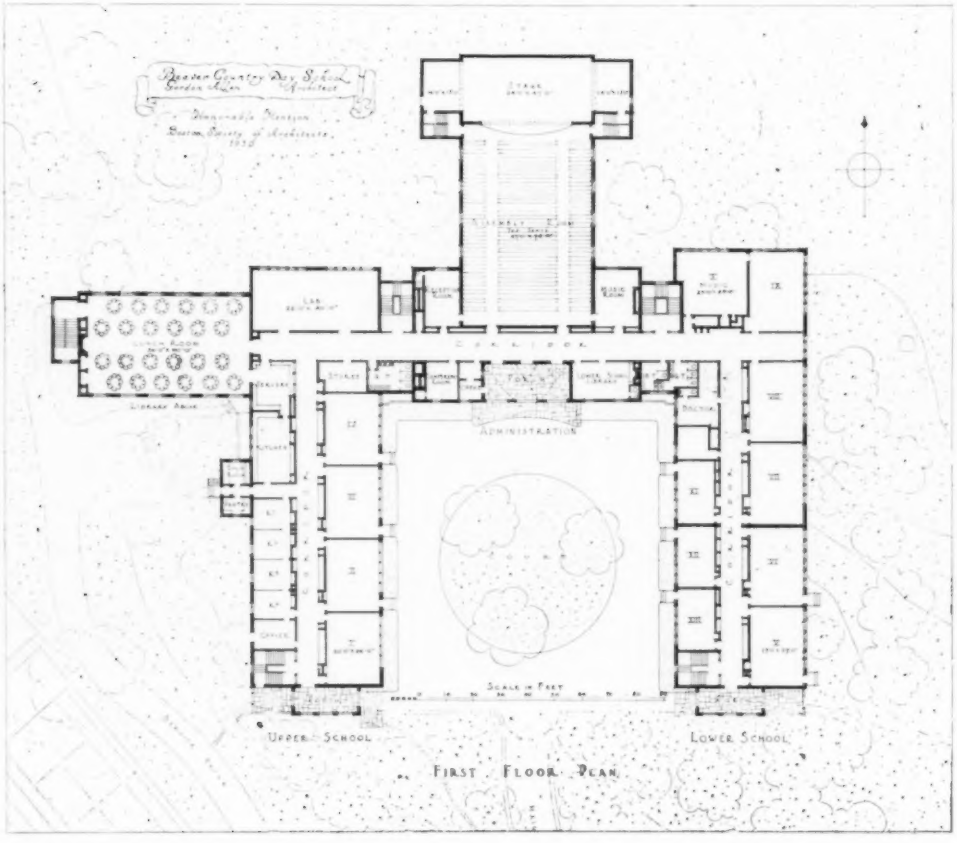
MEMORIAL HIGH SCHOOL, ROXBURY, MASSACHUSETTS
HARRISON H. ATWOOD, ARCHITECT

The swimming pool measures 25' by 75', and is used for instruction and for school athletic events. At shallow end is a seating platform with accommodations for 70 persons.

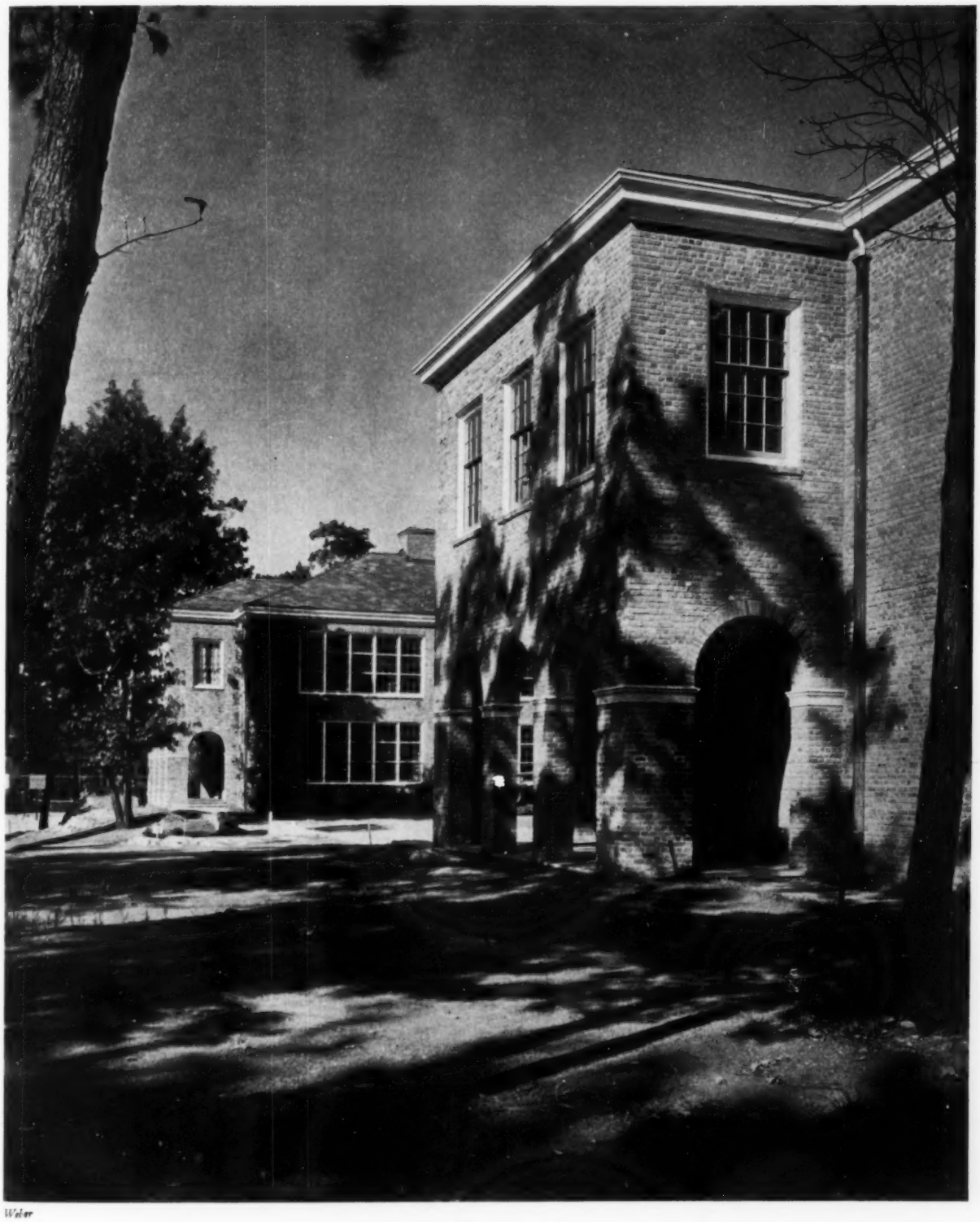
MEMORIAL HIGH SCHOOL, ROXBURY, MASSACHUSETTS
HARRISON H. ATWOOD, ARCHITECT

Weber

BEAVER COUNTRY DAY SCHOOL, BROOKLINE, MASSACHUSETTS
GORDON ALLEN, ARCHITECT



School units are constructed of local field stone and second-hand brick with slate roofs and wood trim. Frame, wood and steel. Steel windows. Cost averaged 47 cents a cubic foot.



Wolcott

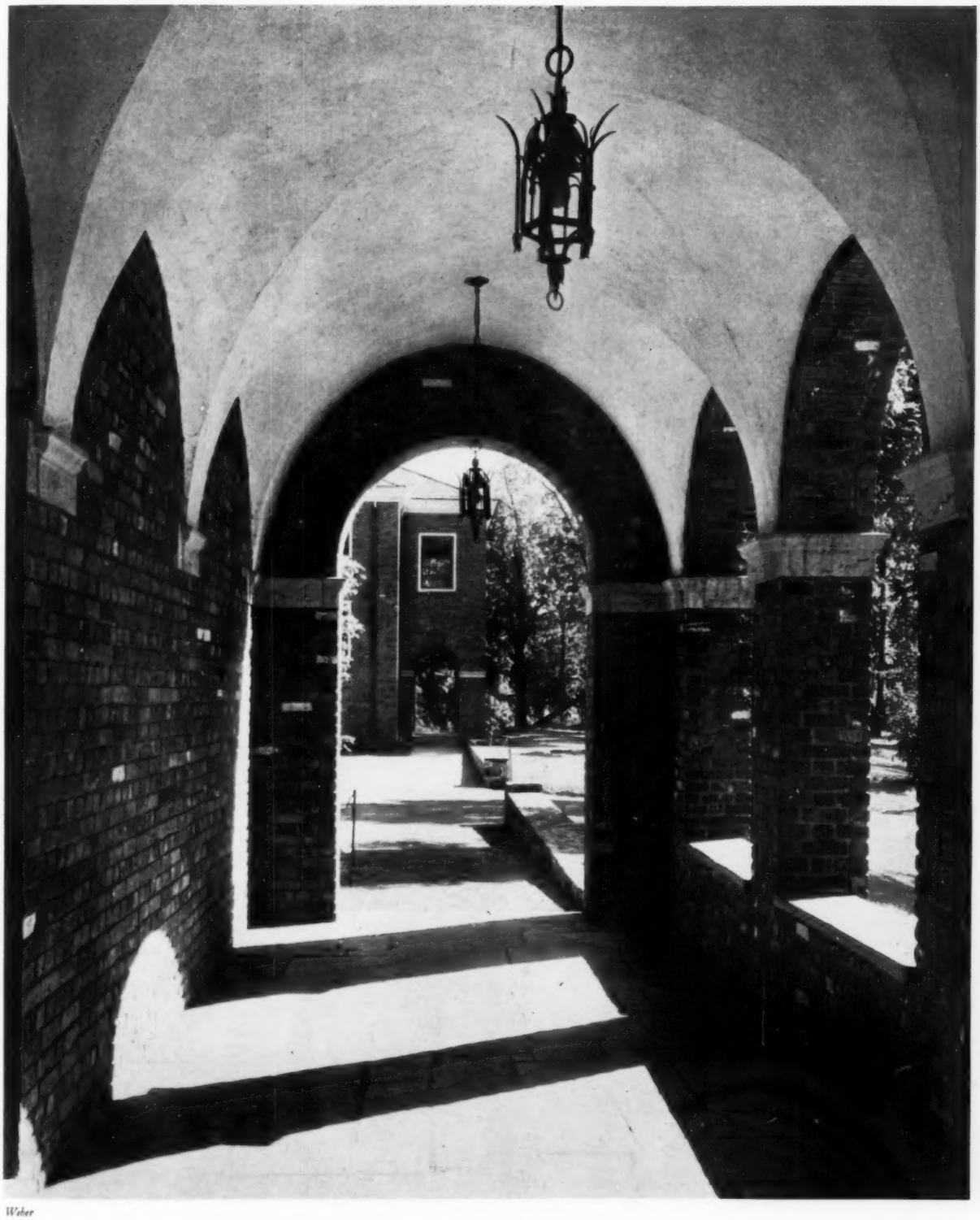
SOUTH PORCHES
BEAVER COUNTRY DAY SCHOOL, BROOKLINE, MASSACHUSETTS
GORDON ALLEN, ARCHITECT

Weber

ADMINISTRATION BUILDING

Weber

UPPER SCHOOL
BEAVER COUNTRY DAY SCHOOL, BROOKLINE, MASSACHUSETTS
GORDON ALLEN, ARCHITECT



Weber

SOUTH PORCHES
BEAVER COUNTRY DAY SCHOOL, BROOKLINE, MASSACHUSETTS
GORDON ALLEN, ARCHITECT

Weber

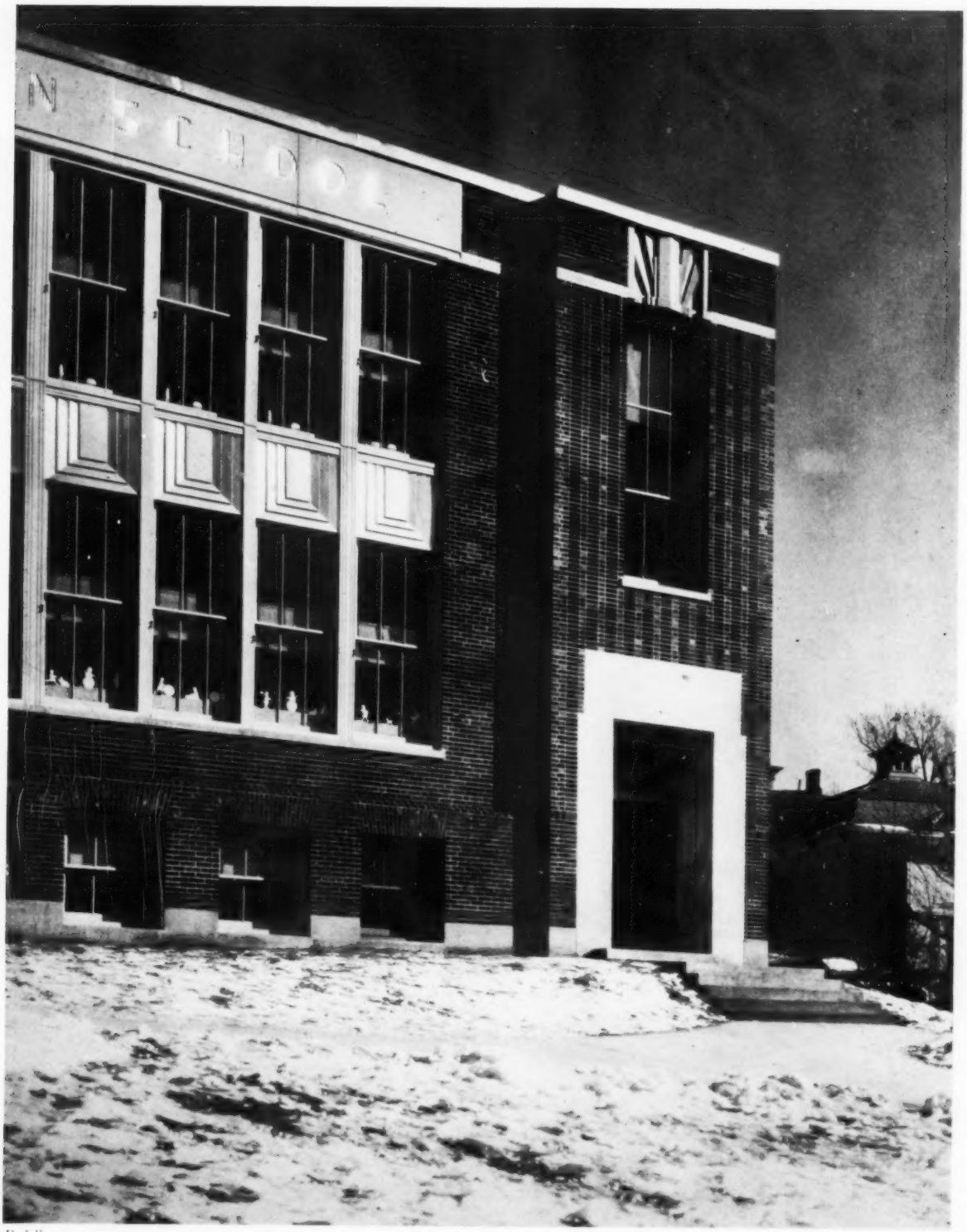
STUDIO

Weber

LOWER SCHOOL LIBRARY
BEAVER COUNTRY DAY SCHOOL, BROOKLINE, MASSACHUSETTS
GORDON ALLEN, ARCHITECT

Haskell

STANLEY SCHOOL, SWAMPSCOTT, MASSACHUSETTS
KILHAM, HOPKINS AND GREELEY, ARCHITECTS



Haskell

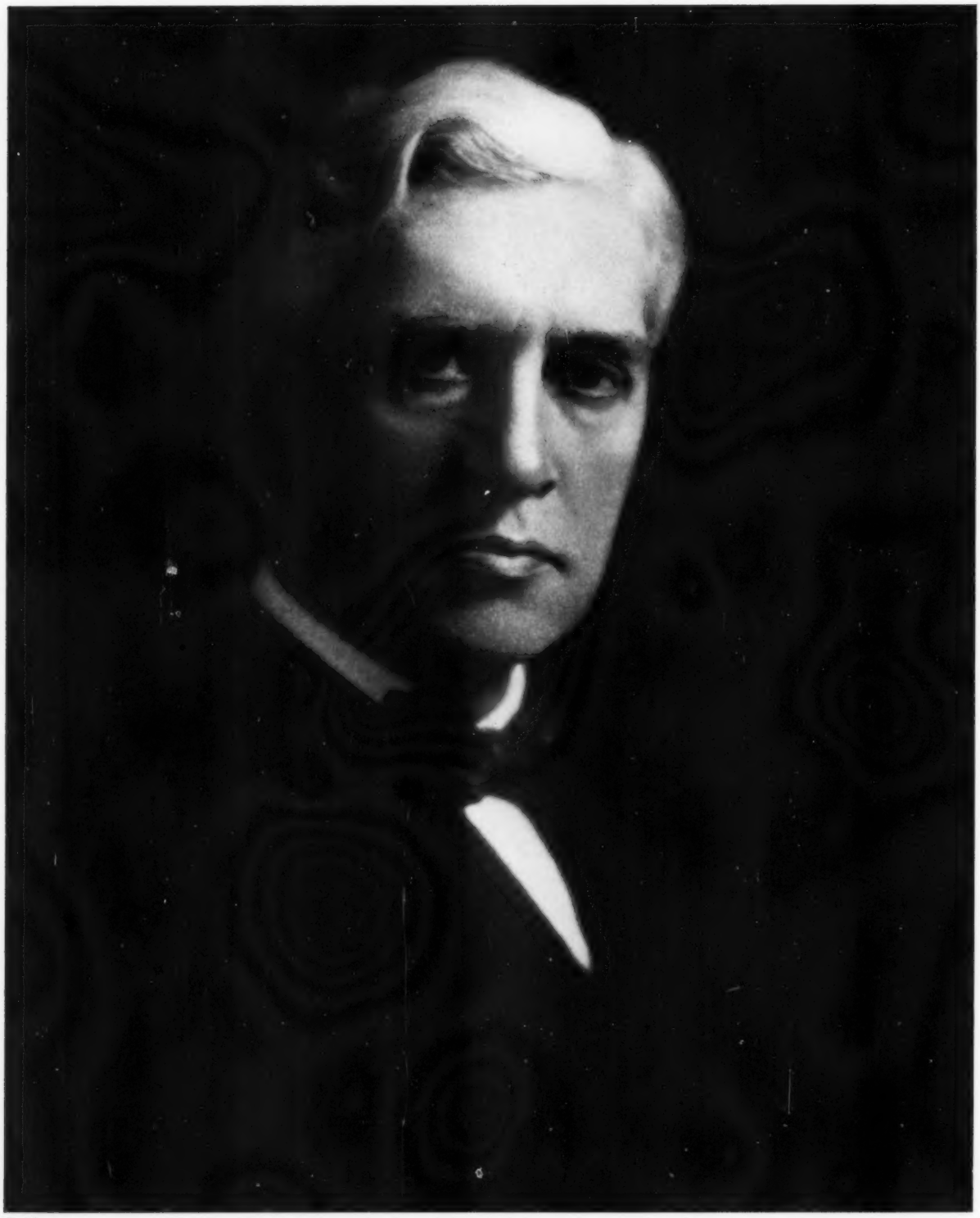
CHARLES J. EMERSON SCHOOL, STONEHAM, MASSACHUSETTS
KILHAM, HOPKINS AND GREELEY, ARCHITECTS

Haskell

CHARLES J. EMERSON SCHOOL, STONEHAM, MASSACHUSETTS
KILHAM, HOPKINS AND GREELEY, ARCHITECTS

Haskell

STANLEY SCHOOL, SWAMPSCOTT, MASSACHUSETTS
KILHAM, HOPKINS AND GREELEY, ARCHITECTS



Kashiba

GEORGE WILSON MORGAN

George Wilson Morgan, for many years chairman of the board of directors of F. W. Dodge Corporation, died suddenly on March 28, 1931, at Hot Springs, Virginia. He was fifty-five years old.

Graduating in 1897 with the degree of Bachelor of Arts from Oberlin College, he entered the School of Law at Columbia University where he received the degree of Bachelor of Laws in 1900 and in the same year was admitted to the practice of law in New York State. He was Assistant District Attorney of New York County in 1902 and 1903, and by gubernatorial appointment, Superintendent of Elections of the State of New York from 1903 to 1906. He had for years been a trustee of Oberlin College which in 1922, in recognition of his brilliant career at the bar, conferred upon him the honorary degree of Doctor of Laws.

In more recent years his work at the bar was largely concerned with banking matters and he was one of the counsel to the commission to revise the New York State banking laws. He was a director of a number of corporate enterprises which had sought his business counsel.

Notwithstanding the heavy demands upon his time by his professional and business activities he found opportunity to follow the natural bent of his cultural tendencies and was an accomplished musician and a student of art, literature and economics, as well as a director of Beekman Street Hospital of New York.

His ability, his personal traits and the esteem in which he was held by his business associates can perhaps be no better recorded than by the following minute of the board of directors of F. W. Dodge Corporation:

The Board of Directors
of
F. W. Dodge Corporation

wishes to record its sense of great loss and deep
sorrow caused by the untimely death of

GEORGE W. MORGAN

its leader and wise counselor for so many years. The individual members feel that each one has lost a personal friend who commanded admiration, loyalty and affection. His modesty, charm, and humor, his patient, sympathetic and vital interest in every matter of policy or detail tending toward the upbuilding of the Corporation and in their own personal progress and welfare can never be forgotten. He had a broad mastery of the larger aspects of business. He was a man of many interests beyond the scope of this company's affairs, yet he informed himself on every phase of its business and also on the progress and welfare of members of the organization whether or not they had the opportunity of personal contact and acquaintance with him. His natural modesty led him to minimize the outward aspects of his leadership. Our entire personnel owe him a debt of gratitude far beyond their own realization, a debt we acknowledge and express on their behalf. His departure leaves the memory of a friend and leader whose inspiration will live with each one of us and whose wise counsel will continue to be the guiding influence in the conduct of this business through the years.

THE EDUCATION OF AN ARCHITECT

By JOSEPH HUDNUT, PROFESSOR OF ARCHITECTURE, COLUMBIA UNIVERSITY

No one will doubt that architects ought to be familiar with the technique of good construction; and by good construction I mean not merely the qualities and processes of traditional materials, such as brick and stone; I include steel, concrete, mechanical equipment, sanitation, in their most recent and progressive aspects. That the fundamentals of this technique may be taught by instruction and systematic exercise is a fact too obvious to need a sententious affirmation, although it is equally obvious that it is only through the actual practice of his profession that an architect can develop this technique to the point where it is commensurate with the demands of contemporary architecture.

It is nearly if not quite as evident that architects ought early in life to attain some understanding of the civilization whose ministers they are to be. Although it is only through a varied experience and a sustained contemplation that philosophers arrive at what they are pleased to call social principles or economic law, it may be taken for granted that the first approaches to such an understanding can be made in college.

Two responsibilities of a school of architecture then are plain. First, to teach through processes of instruction and discipline the science of construction, especially in its more abstract and general phases, so that the student may leave the school with that habitual imaginative experience with materials and constructed forms that is the necessary basis for a command of structural design. Second, to explain, so far as these can be explained, the important facts concerning those economic and intellectual currents in which the student lives; to make him so aware of these currents and of their origin, nature and direction, that the need to know them more profoundly will appear urgent and necessary.

Has the school no further responsibility toward its students?

Of course it has; and this third responsibility is more exacting than either of the two that I have described. This responsibility is the encouragement of those qualities of the mind—or the soul—of which the creation of beauty is the tangible expression.

An artist is a rare person, exceptionally endowed. But his endowments are useless without training. The art of the world was created not merely by gifted men but by men who, being gifted, submitted to a most arduous education—an education oftentimes self-imposed and self-directed, but an education nevertheless.

These facts seem evident enough; but I am aware of a very widespread skepticism regarding the need for the education of the senses—particularly in respect to the plastic arts. Perhaps the source of this skepticism is the dislike of men for discipline and endeavor. The education of the senses requires so concentrated and sustained an effort that we willingly believe that it is unnecessary. No able-bodied 100% American hesitates for a moment to form esthetic judgments concerning architecture, and the notion that architecture is created by a sudden frenzy of untaught genius satisfactorily explains his own inability to create beauty.

Until recently this somewhat juvenile concept has been held in check by the awe inspired by the hocus-pocus of Vignola. The Five Orders were invaluable for that conspiracy of bewilderment that is essential to every profession—especially to the profession of teaching—and even big business men were willing to abdicate their right to pass judgment in the presence of a professor who could clearly distinguish a Corinthian capital from a cauliflower. Eclecticism, with its insistence upon an

erudition apparently profound, provided the colleges with bastions even more formidable: a casual comparison of the pseudo-intermediate-ornate style with the quasi-rectilinear-perpendicular sufficed to end abruptly all discussion of architectural qualities.

But today, with Vignola driven from his throne, and with Eclecticism quite discredited by its own excesses, we have once more to deal directly with the romantic idea of untaught genius. Is it not an impertinence to offer assistance to genius?

The popularity of the doctrine, or doctrines, called *functionalism* has given a new significance to this question. Since Le Corbusier provided the necessary mystifications the dogma of functionalism has taken on an almost religious character: has it not already its mythology, its saints, its martyrdoms, its rituals, and its pantheon of gods—one of them from Chicago? And now that it is tinctured with romance (quaintly called "City-planning") it seems destined to carry everything before it.

Whatever functionalism may mean to its priests, the public understands it to mean that architectural beauty can be created by a process of logic. Beauty is the satisfaction that we experience when we perceive the fitness of an instrument for its use. Then let an architect merely plan and build intelligently; beauty will dwell unbidden in his organic structure.

Therefore our snooty schools of architecture have no need to concern themselves with beauty. Economics, business, sociology, physics, the cost of materials and the marketing of mortgages ought to be our preoccupation; where these are known, taste and imagination will spring mystically and unconsciously into sudden being. And if they don't spring into sudden being, so much the worse for taste and imagination.

It was a fault of the Renaissance tradition, from which our system of architectural education is sprung, that it ignored too often the practical common sense that must necessarily be the basis of a useful art like architecture. But that fault does not discredit the ardent and ennobling search for form that is the important fact about Renaissance architecture. Indeed, the effort to reconcile the needs of contemporary life with abstract conceptions of form is the very heart of the Renaissance. The Renaissance committed many absurdities, but never the supreme absurdity of mistaking a condition of beauty for its source. It never supposed beauty to be a by-product of science.

In truth, no activity requires so intense and sustained a concentration, so alert and subtle a power of discrimination, as the apprehension of spatial form embodied in a fine work of architecture. To create such works a most exacting and continuous discipline of the senses is absolutely necessary. It is no accident that architecture is the least understood and least popular of the arts, that its enjoyment is limited to a fraction of mankind. It is no accident that the world's great buildings are the work of men over fifty years of age. It takes about fifty years to educate an architect.

Now, you cannot tell a man how to create beauty or even how to apprehend beauty. If I tell my student that the Parthenon is beautiful he will write in his notebook that the Parthenon is beautiful. But he will probably have not the slightest notion of its beauty; not all the learning of the world can give him that. If I tell my student that the Parthenon is beautiful because it is "well-proportioned" or "refined," if I tell him, like Mr. Sheldon Cheney, that it was "produced" by functionalism, he will write that down; but that will not in the slightest degree help him to "produce" a Parthenon. He will be better off if I tell him nothing.

No doubt my analysis and criticism of buildings is of use to my student, but it is of use on the condition that I do not throw a screen of dogma or sentiment between him and their formal significances. No doubt the imitation of buildings, particularly of great masterpieces, is a natural and useful process in education; but this imitation

must be prompted by discovery and emulation, not by standards academically arrived at. He would be a strange composer who, having discovered Mozart, did not wish to imitate him; still stranger would be a playwright uninspired by Moliere. He who has not imitated the Parthenon has not discovered the Parthenon. That is one difference between the Parthenon and the City Hall of Philadelphia.

But these processes are relatively unimportant. What is important is the direct and constant search for form. It is most essential that the student throughout his college term should have not merely instruction and exercise in practical planning and building, not merely a growing awareness of the subtle and intimate relation of architecture to society, but, more fundamental than either of these, a sustained experience with esthetic form. It is the urgent business of the school of architecture to organize and direct this experience.

The processes of the school will not be understood unless this intention of the school is kept in mind. The programs in design are written and studied not only with a view to their actual execution but with the hope that they may offer opportunities for the exercise of taste and imagination. Criticism, methods of attack and presentation, judgments and awards are all directed primarily to this end; and although common sense may be commended, the first prizes must always go to those who, proceeding from common sense, arrive at beauty. Good economics, good sociology, good draftsmanship and good telephone service are excellent things; but let's not mistake them for architecture.

A JOB FOR ALMA MATER

By RALPH G. GULLEY, PROFESSOR OF ARCHITECTURE,
RENSSELAER POLYTECHNIC INSTITUTE

The shortcomings of architectural education, with its unchanging self-satisfied methods and retrospective tendencies, have become so obvious in the past few years, through the unprecedented growth in the demands made upon the architectural profession, and also in the apparent incapacity of the profession to serve its function satisfactorily, that those associated with the profession can ill afford to remain dogmatically attached to the established practices of nineteenth century tradition. To continue such a course further, in the face of demands made upon the architect for what he is not, will merely lead to further embarrassment. Indeed, it is not altogether improbable that such tenacious adherence to that which no longer concerns us may eventually lead to the profession's extinction, for it is true that the architect is already threatened with being consumed by that which he refuses to be.

We have come to forget the primary cause of our existence by allowing ourselves to become so absorbed in the dilettante game of applying architectural expression of every bygone civilization to our own in a futile effort to find a "fit" that we forget that we are architects and not historians and archaeologists. We do not live in the past; neither do we live for the past. It is mainly with the present that we must deal, and if we cannot reconcile our creative ability to such insistent factors as economic and sociological forces, mechanical fabrication, and standardized shop production of materials, we might as well count ourselves out. It is not for us to choose our situation. We can either accept it, and with it our responsibility, or else refuse it; and to refuse it is comparable with consigning ourselves to the scrap heap.

It is our business to equip ourselves with

the capacity to interpret, satisfy, and thereby express, the needs of our own age and civilization in the manner it demands. The result will automatically be our Architecture.

How are we then, as educators, to go about tackling the task we have cut out ahead for us? We might start with a consideration of the fact that we have many obsolete methods, much obsolete equipment and many antiquated ideas to dispose of. The educators' task is one that no one could envy. Whether the architect will be found at the helm of the master building organizations of tomorrow, or whether he will have bowed to the better equipped and have been forced to throw his lot with the "hired help," depends more upon the vision and efforts of the educators in the next few years than upon any other single factor. If we would succeed, one thing seems to be certain: our product will bear little resemblance to our product of today. Our product must be more thoroughly conscious of his task and more adequately equipped to take care of it. We must envision the state of affairs in which our students will find themselves in practice a few years hence. But before we can do that, we must take the pains to find out something about the present—even though it be distasteful to us to desert even temporarily the cloistered atmosphere of the academic circle to which we have become so accustomed that to go outside of it is to feel ourselves a stranger. Many of us cannot give attention to the crying needs of the present because of being still too much engrossed with the pretty-picture antics of the Ecole *poché* teams of the inglorious Nineties when *architectes* so loved their work that they could find no time to accept commissions. We must once and for all rid ourselves of such nonsense. We have had enough of paper architecture which results from the selfish motive of deriving personal pleasure at the expense of others in trying to express our individual selves. We have been steeped in "styles" for so long that there is no visualization of architecture unless it be accompanied by some parasitical label of recognition known as a "style". We have become so used to working contrary to logic that we have even taken the great movement now going on in Europe since the War and tried to play with it as just another "style". It would seem that our idea of Beauty is only skin deep after all.

Arriving at an architectural result is a process—a process of mental organization—and if we would avoid the pathetic results caused by our approaching our problems with the cart before the horse, we must learn to think of this process (call it *Architectural Design*, if you like) in terms of analysis, research and investigation, correlation, and synthesis, with due consideration for all factors concerned; and not as a purely imaginative process based upon the arbitrarily accepted opinions of "taste." Only by this method can we hope to avoid the superficial *appliqué* and the superfluous inconsistencies which characterize almost all of our architecture. Our architecture can only then be the definite result of satisfied function, and no longer an arbitrary initial choice of accepted forms into which we try to squeeze our necessarily distorted functional elements.

Let us not concern ourselves with whether architecture is more of an art than a science, or vice versa: rather let us think of it as the art of organizing and applying the sciences of building to the best interests of every consideration and requirement involved in a given condition. We have been so afraid of losing our identity in the rushing torrent of scientific advancement that our reactionary endeavors to champion the noble cause of Art have blinded us in estimating our own potentialities. Our identity as Architects depends upon our being thoroughly well-rounded, and we cannot afford to be influenced into making an art course of architecture for the student who is more of an artist than a scientist and engineer; nor can we afford to make a purely scientific and engineering course for the student who

is more of a scientist and an engineer than an artist.

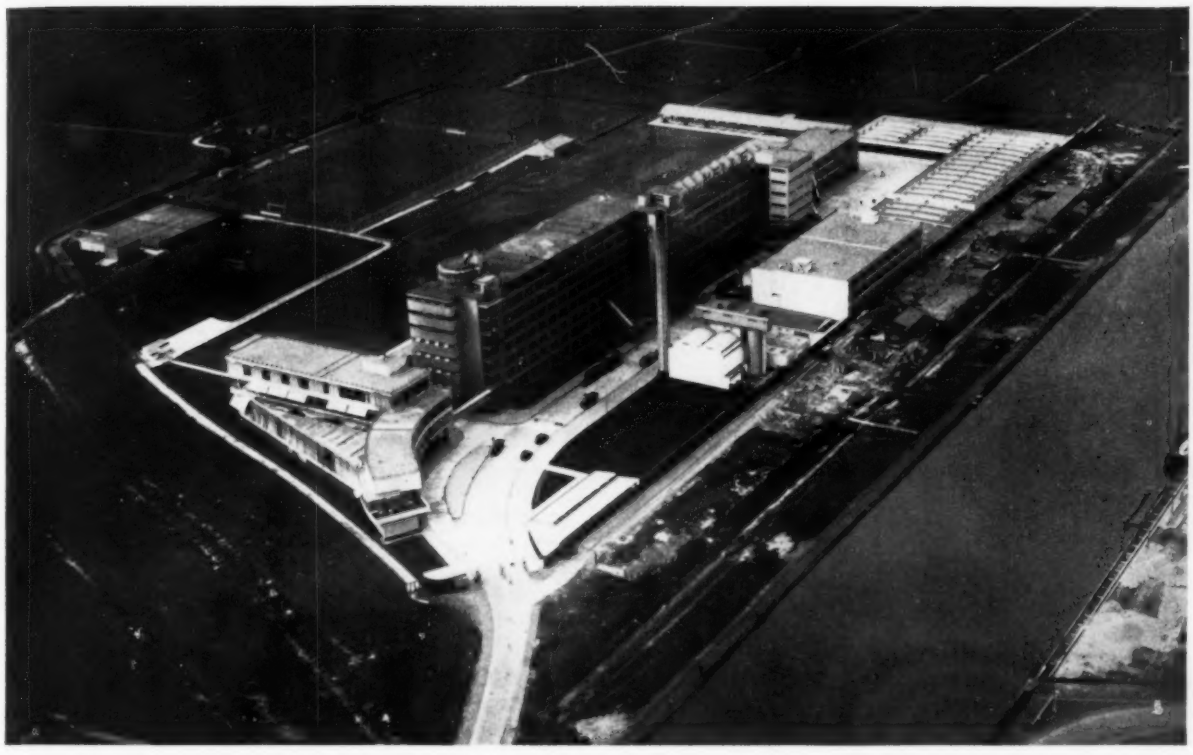
Let us give attention to the dead wood in our curricula and among our faculties. Let us then consider how our courses might be more effectively correlated. For instance, we might consider the ineffectiveness of teaching design and construction as two distinctly separate courses when one is so inseparably the counterpart of the other. The problems in design could easily be made the problems in construction. If we would intelligently relate our courses, we might encourage the members of our staffs to work together more harmoniously and sympathetically.

Why can we not teach the history of architecture and art as *history*, and not as a course for gaining an architecturalvocabulary of ready-to-use motives and solutions? Historical developments in architecture and art must be related to the economic and social factors responsible for their evolution. History is most valuable through the application of the deductions we draw to our problem of understanding and interpreting the nature of the Present.

We should see to it that each successive problem given in design is a definite step in a carefully correlated scheme of progression. And can we not remember that the whole purpose of giving problems in design is defeated when we allow a problem to be made an end in itself? The problem is but a *means* to an end, and the chief end is making it a source of supplying the student with the mental stimulus necessary for him to develop his analytical powers, his ability to cope with the various considerations, to apply intelligently his acquired technical knowledge, and the capacity to crystallize these considerations into a unified solution which will give the best obtainable result within his power to produce. We must avoid the possibility of a problem serving as a means of glorification for the student, the critic, or the school. Therein lies the possible danger of interschool competition. Everyone involved in such participation is influenced in his actions by feeling subconsciously that his reputation is at stake.

That nationally known institution, the Beaux Arts Institute of Design, through which much of our work in competitive design is carried on, has little to offer the school with a staff able to produce its own schedule of programs. Such competition, as conducted at present, encourages our making the problem itself the desired end, and it may be repeated that this is not a desirable thing to do. The B.A.I.D. has sponsored a noble undertaking, and credit is given where credit is due, but its task is almost too stupendous to be put upon the shoulders of those competent men who cannot afford to give of their whole time and energies as needed to make its purpose function as satisfactorily in execution as it should. Poor programs, and hasty judgments often rendered at the mercy of disinterested and dilettante jurors, have pointed to the inadequacy of such a system under the conditions in which it is now forced to operate.

Let us not be afraid to develop in our students a desire for sympathetic collaboration with all parties concerned in building activities, and to point out to them that such is the only possible means by which we may reach a satisfactory result. Out of understanding each other will grow a much needed respect for the part that each plays, and it will be clear that one does not function efficiently without the others. Subject the student to the principles of economics, finance, building promotion, business administration, and to the possibilities of research in chemistry and physics as applied to modern building problems, such as acoustics, illumination, color and the materials of construction. These will undoubtedly play a large part in the architect's future activity and only by his acquaintance with such considerations can we expect him to deal competently with that which he must, if his professional services are to be indispensable to the progress of his age.



THE VAN NELLE FACTORY, ROTTERDAM

J. A. BRINKMAN AND L. C. VAN DER VLUGT, ARCHITECTS

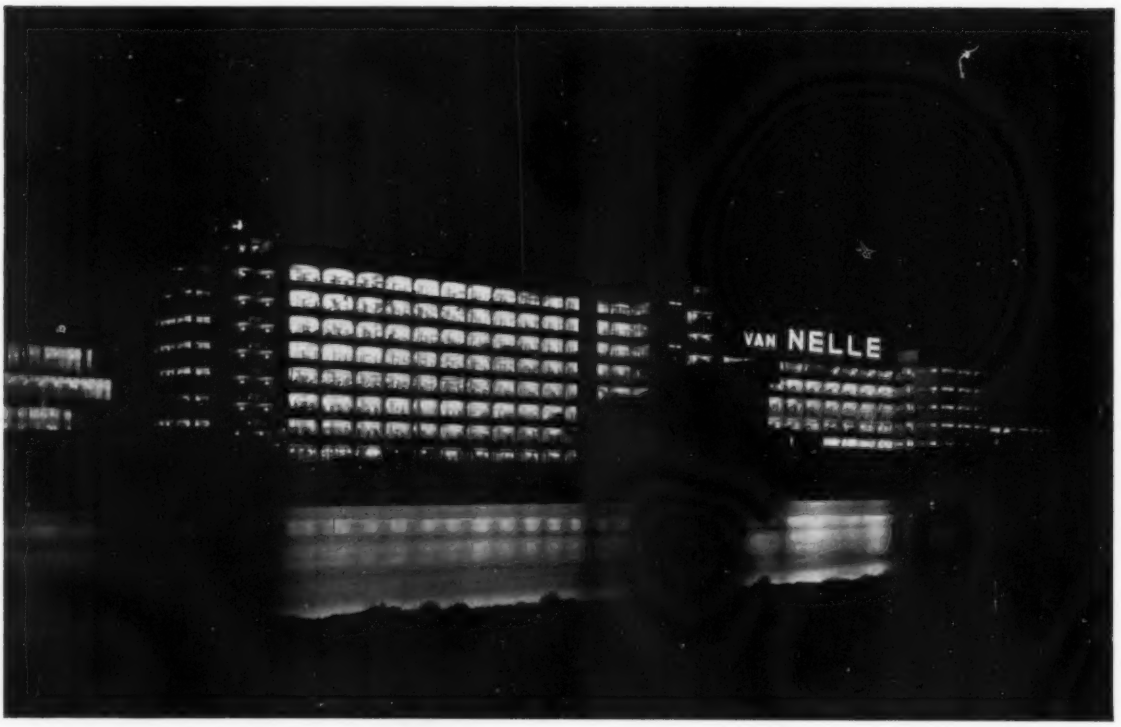
Plan, construction and specific features of the factory units of this plant were described in detail in the October 1929 issue of THE ARCHITECTURAL RECORD. Since then additional units comprising office building, cafeterias, store building, shops, garages and playfields have been added.

LAYOUT

The three units of the factory building house the machinery for packing tobacco, coffee and tea. Power plant, storage, shops and garages are placed toward the river. The curved building between the gate and the main building contains offices, cafeteria for employes, library, etc. A tea room with observation platform is placed in the circular structure on the roof of the factory building. At the rear of the lot are football fields and tennis courts, with dressing rooms for employes and workers, and workers' cafeteria. Space for future expansion is provided between the playfields and the factory building.

CONSTRUCTION

Columns and floors, reinforced concrete. Mushroom system in factory building with column spacing determined by the machine layout. The cantilevering of the floor provides a corridor along the exterior wall for conduits, heating pipes and traffic. Spandrel units of steel, two sheets with 3 cm. *Torfoleum* insulation between. The exterior plates and the sash are spray-coated with zinc. The windows can be cleaned from a *Tramrail* cage driven on a rail that follows the roof lines of the buildings.



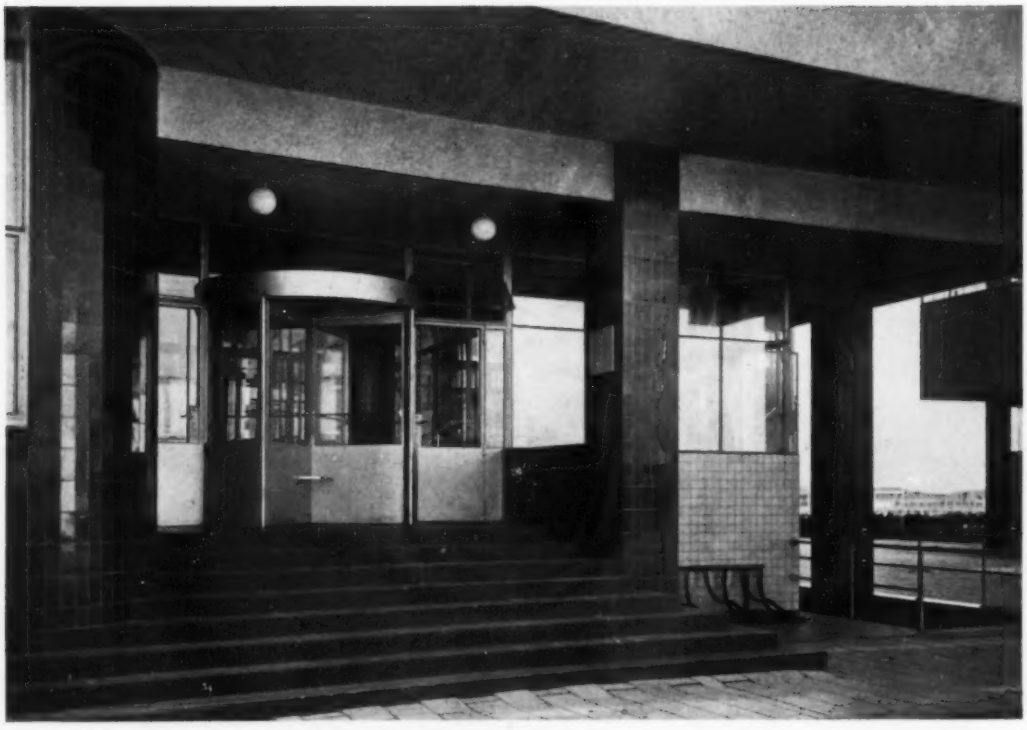
Night lighting for advertising.

VAN NELLE FACTORY, ROTTERDAM
J. A. BRINKMAN AND L. C. VAN DER VLUGT, ARCHITECTS

Gatehouse, office building and factory with observation platform and tea room.

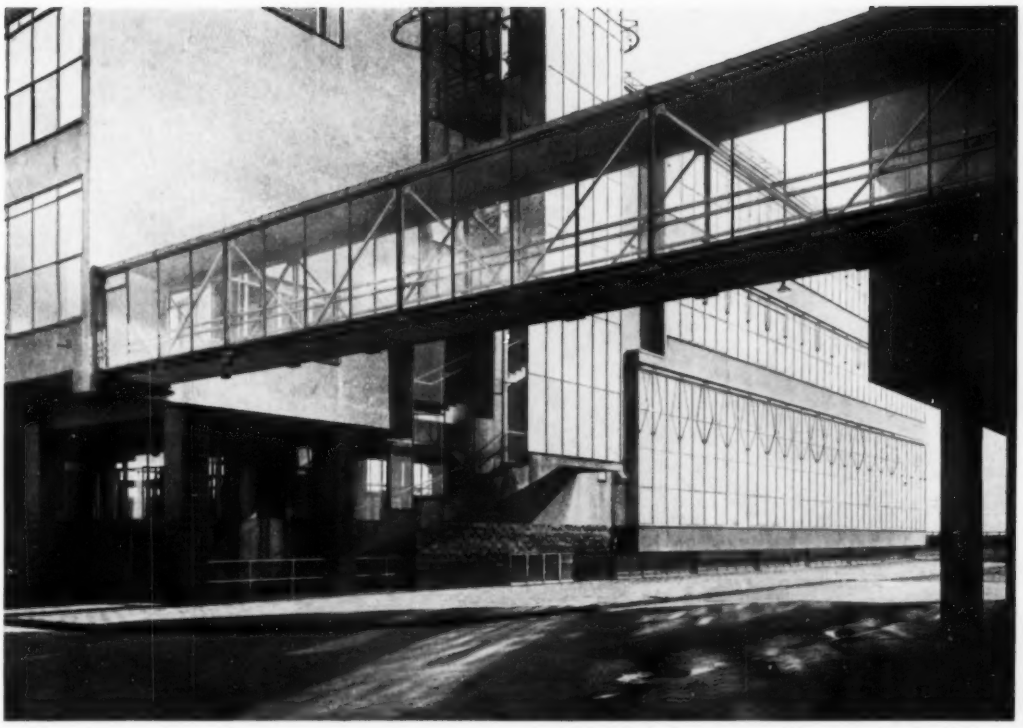
VAN NELLE FACTORY, ROTTERDAM
J. A. BRINKMAN AND L. C. VAN DER VLUGT, ARCHITECTS

View from gate.



Entrance to office building. Black and yellow glazed tiles, aluminum.

VAN NELLE FACTORY, ROTTERDAM
J. A. BRINKMAN AND L. C. VAN DER VLUGT, ARCHITECTS



Bridge from office building to factory. Tubular steel construction.

Employes' cafeteria on top of office building.

VAN NELLE FACTORY, ROTTERDAM
J. A. BRINKMAN AND L. C. VAN DER VLUGT, ROTTERDAM

Waiting room in front of executive offices overlooking general office. Blue and gray rubber flooring. Chromium-plated furniture. Aluminum partitions.

General office with conversation booths for each department. Blue and gray rubber flooring. Aluminum partitions.

VAN NELLE FACTORY, ROTTERDAM

J. A. BRINKMAN AND L. C. VAN DER VLUGT, ARCHITECTS

ARCHITECT'S FEE IN GETTING BUSINESS

BASED ON OFFICE PRACTICE OF ROBERT D. KOHN, AND SHREVE, LAMB AND HARMON, ARCHITECTS

Payment for the architect's services frequently has an important influence on the ability of the architect to obtain profitable work. The basis for payment should be determined by the architectural service which a particular project will require. In some cases the straight percentage basis will be found entirely satisfactory; for other types of work, especially large buildings where the plan of a typical unit or floor is repeated to a considerable degree, a fixed fee will frequently be found most satisfactory to the prospective client. For types of jobs which will require a great deal of architectural work in proportion to the value of the finished job, some form of cost-plus fee will frequently be found most equitable and satisfactory to both the client and the architect.

COST-PLUS FEE

Example: *Robert D. Kohn, Architect.* Mr. Kohn believes that for most work the cost-plus fee is the best basis for payment. He points out that an architect can give more time to the study of a project when it is on this basis than on a percentage or straight-fee basis. The cost of the additional study will generally be reflected in a better building at a lower cost. Theoretically an architect is always ready to scrap his plans if he sees an opportunity for improving them; but as a matter of fact the architect has a justifiable objection to any changes in his preliminary plans which will cost him his own money. Should the change in plans result in a reduction in cost of the project, it is decidedly unfair to the architect for him not only to stand the cost of making changes which save the owner money but also to have his fee reduced through lowering the cost of the project on which his fee, if on a percentage basis, is based.

In convincing the prospective client of the value of a cost-plus fee service, it is well to have in the contract a percentage limit to the amount which the architect will receive.

Form of Cost-Plus Fee Contract: Mr. Kohn uses the *Standard Form of Agreement Between Owner and Architect* (issued by the American Institute of Architects), when a percentage of the cost of the work forms the basis of payment. He makes the following insertions and modifications:

On the bottom of the first page, under "The Owner agrees to pay the Architect for such services a fee of," he inserts "*not to exceed seven per cent of the cost of the work*, with other payments and reimbursements as hereinafter provided, the said percentage being hereinafter referred to as the 'basic rate'." He also adds, "*and three per cent on the mechanical trades, as noted in paragraph 13.*"

In Section 2, Reimbursements: "The owner is to reimburse the Architect the costs of transportation and living incurred by him and his assistants while traveling in discharge of duties connected with the work." The phrase—"*and the cost of the services of heating, ventilating, mechanical and electrical engineers*"—is crossed out.

In Section 5, Payments: "Payments to the Architect on account of his fee shall be made as follows, subject to provisions of Article 4, "*and as outlined on the following page, (Par. 13).*" Paragraph 13 follows: "The Architect is to receive in compensation for his work: (a) the direct cash expenditures of his office in the payment of the salaries of his staff and other assistants of any character for necessary work done while engaged on this project; (b) plus 50% of this amount to cover the office overhead; (c) plus a charge for the time of the principals of the Architects' firm charged for on a salary basis when the time of these principals is directly devoted to this work; (d) plus one-third of the total amount produced by the addition of items (a, b, c) as profit; (e) plus the net cost of blueprints; provided that on this cost-plus basis of calculated fee the total amount (a, b, c, d, e) is not more than the basic rate previously mentioned.

"It is further agreed that the total amount paid to the Architect shall not in any case exceed the basic rate of 7% on the cost of the general construction work of the proposed building, and that on the cost of all Heating, Ventilating and Electrical work on which the owner pays the fees of Consulting Engineers the amount paid to the Architects shall not exceed the basic rate of 3%.

"The Architect will render bills to the Owner for services on or about the first of each month for sums due him under this agreement based on the costs up to the end of the previous month, and these bills are due when rendered and are to be paid before the 15th of the month. It is understood, however, that the

through periodic visits to the work and does not total of these bills rendered up to any particular time is not to exceed, in proportion to the maximum fee that would be due at the completion of the job, the ratio established by paragraph 5 that the Architect's work up to that time bears to the total work which he is to perform."

The cost-plus fee is a particularly suitable arrangement where the architect has a more or less permanent consulting relationship with a large client. Such a contract not only takes care of all kinds of jobs which the client may have coming up but permits the architect to make special studies for the client which may result in the client building when he might not otherwise build.

Ethical Culture School, *Kohn and Stein, Architects:* This job was taken on the basis of draftsmen's time plus a percentage for office overhead, architectural services and profit. The early sketches were for a large fireproof structure to house the entire school. After much study (more than an architect could ordinarily afford to give on a fee basis), it was found that a better and less expensive school system could be provided if housed in small connected units. In this case the client obtained a better building at a lower cost than he probably would have had under the fee system, and the architects were enabled to work out a thoroughly satisfactory solution without financial loss to themselves.

FLAT FEE

Example: *Shreve, Lamb and Harmon, Architects.* This firm believes that for large buildings the architect should receive a flat fee for his work. They feel that a fixed percentage for architectural work, regardless of the type of job, is not a satisfactory method of procedure; that the architect who demands a flat percentage contract before making any study of the client's problem frequently loses an opportunity of developing real business. They prefer to have a conference of the members of the firm to consider all the requirements of the prospective job, analyze drafting and overhead costs of similar jobs, and arrive at a definite cost budget for the job at hand; to this budget is added the desired profit. The result is a very simple form of contract with the client, shown as follows:

Contract Form:

Dear Mr.———:

We write to confirm statements previously made to you as to the nature of our services as architects and the terms of our employment in connection with your proposed ——— building to be erected at———.

We will render professional services in accordance with the enclosed memorandum and will do all of the work listed for a fee of $———, this amount to be paid to us in stated payments, as follows:

1. Upon approval of preliminary sketches and authorization to proceed with the working drawings, the sum of..... $———
2. Monthly thereafter on the first day of each month the sum of $——— until we have received in such payments the sum of..... $———
3. Upon approval of structural plans and specifications by the Bureau of Buildings the sum of..... $———
(or enough to make the total amount paid us at this state equal to $——— or ——— of the total fee.)
4. Monthly thereafter during the progress of the work on the first day of each month, the sum of $——— until these payments shall amount to..... $———
Thirty days after substantial completion of the building the balance, to wit, the sum of..... $———

Total..... $———

The professional services of Shreve, Lamb and Harmon, architects for this work, will include:

1. Necessary conferences with the Owner or with the Builder (and Owner's Real Estate Agents).
2. Further study of preliminary sketches which have had preliminary approval.
3. Submission of sketches to Municipal Authorities for preliminary approval of project in relation to Zoning Ordinance.
4. Preparation of preliminary specifications.
5. Preparation of the working drawings including plans, elevations and sections, large scale and full size detail drawings.
6. Preparation of complete specifications by trades.
7. Checking necessary shop drawings.
8. Cooperation with engineers engaged by (us) (Owner) for the design of the structural steel, heating and ventilating, plumbing and electric work, and elevators, and the incorporation in the structural plans and specifications of any features necessary to provide for mechanical equipments.
9. Cooperation with the Builder in preparing the schedule for the execution of the work and in the award of such subcontracts as may be let.
10. Preparation of drawings and applications for submission of work to the Municipal Authorities for their final approval.
11. Keeping contract records showing the cost of the work as reported to us through general contracts, subcontracts, or vouchers, on account of which cost we will from time to time certify to the amounts due the General Contractor.
12. Supervision as necessary to assure that the work is being executed generally in accordance with the plans and specifications. This supervision will be

mean continuous supervision or detailed inspection of materials or executed work.

13. The above services are related to the basic building and standard or typical subdivision of spaces, and do not include special work for tenants or non-typical tenants' layouts, or special finish of spaces which may be occupied as executive offices or banking spaces for which detailed drawings of wall, floor and ceiling treatment or special equipment will be required.

14. If, after drawings have been approved, changes are made necessary by decision of the Owner or by any cause beyond our control, we are to be compensated for the work of making such changes and bringing the drawings up to the stage previously approved. Such compensation shall be not less than ——— times the cost of draughtsmen's time required to make the changes.

15. The furnishing of ——— sets of copies of all working drawings, specifications and details. Any additional copies are to be paid for by others, and any disbursements made by us on the Owner's account, such as traveling expenses, telephone toll charges, telegrams, etc., are to be repaid to us."

FILING BLUEPRINTS

By ERICH SCHMIED

One of the most difficult problems in all offices is the proper handling and filing of blueprints. For years contractors have used pigeonhole files or racks similar to those used for newspapers in libraries. Many other systems have been tried, all of which proved bulky and a continual source of lost time and energy. We have developed in our office a complete system for filing all kinds of data, including contractors' drawings, estimates, and special job data. This entire system has been built around a method for filing blueprints.

The system is absolutely uniform for all types of data as well as for blueprints. It is sufficiently flexible to permit the filing of blueprints separately from the job files and the other data. In addition, this scheme eliminates all waste space, is economical, and can be operated quickly.

The office is equipped with cap-size drawer type (vertical system) filing cabinets of standard manufacture. We begin by starting a "Job File," which consists of contract documents, reports, costs, etc. A card separates each class of information. We call this the "Estimate File." In it is the detailed estimate filed in accordance with the classifications. Following is a division for correspondence containing a folder for each firm connected with the job; thereafter, a division for the complete original set of architectural drawings (blueprints); then one

Browning

This is what happens when blueprints are filed away in pigeonholes. In the accompanying article Mr. Schmied, who is president of the S. & W. Construction Co., Memphis, Tenn., describes the system he has developed to preserve the blueprints.

for the complete structural drawings, followed by the complete mechanical drawings.

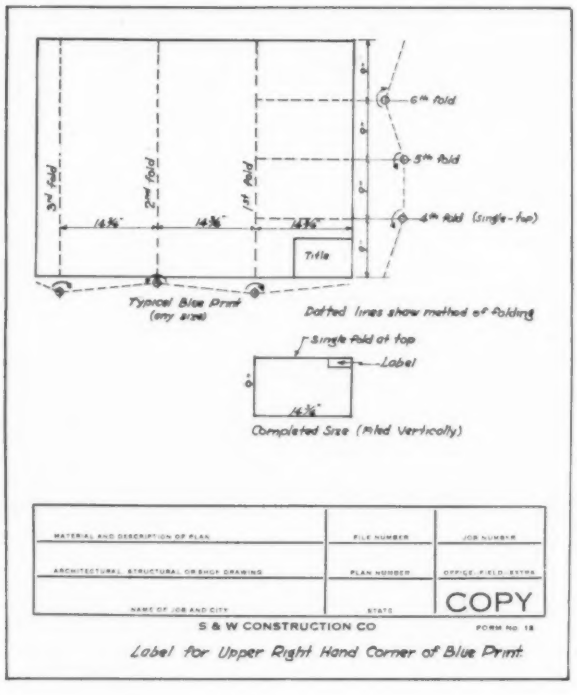
We file everything numerically, employing a system similar to the Dewey System used in many libraries throughout the country. The numbers, however, do not correspond with the Dewey System. As a matter of fact, we obtained the original numbering system from the A.G.C. classifications which were devised some years ago. This system is carried on throughout the office files. All data are filed under these classifications. Consequently, in our job files, all matter pertaining to one subject or item of work is filed under that particular classification and can be readily found. All shop drawings are likewise filed under these same classifications. Beginning with the card index known as "Shop Drawings," we then have a number of tab indexes in our file, each with a classification number indicating the type of work covered by the blueprints which follow the tab. The blueprints are then filed according to the number of the sheet in the title. We file therein the preliminary approved copies, together with the final approved copies. Quite naturally this system can be carried on indefinitely. Our label takes care of the replacement, or the proper filing.

The blueprints are folded according to the system which is illustrated herewith. This method has the following advantages: first, the title can always be found in the lower right-hand corner of the folded sheet; second, the upper fold, which is exposed when the file is opened, is in the form of a single fold, within which may be found the entire blueprint; third, the index system can be applied to a sticker label placed in the upper right-hand corner of the folded blueprint. On this sticker is recorded the job number, classification number, sheet number, class of work and job.

In using this scheme we have found that any large project involving the use of many blueprints can be taken care of with one or two ordinary standard section steel files. Every shop drawing and every blueprint of any kind can be found at a moment's notice.

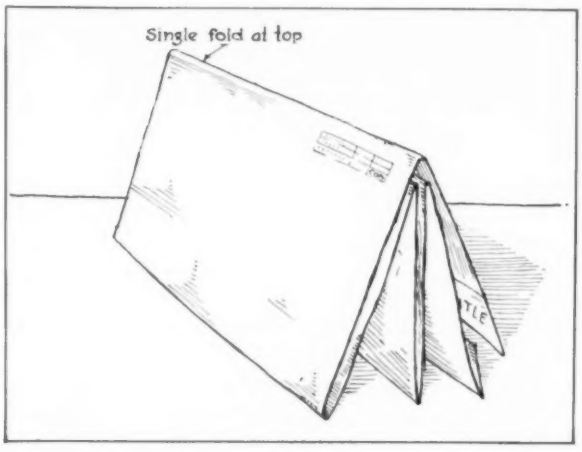
The accompanying sketch shows the method of folding the blueprints. This is perhaps the most essential part of the work. We believe that this additional amount of effort saves hours of labor in hunting for blueprints which might otherwise be scattered or filed in rolls. The saving of time in obtaining any desired print is so marked that once this system has been used one will endorse it without further discussion.

The method of folding the blueprints applies to drawings of any size or shape unless the print itself is smaller than the cap-size sheet required for the standard file. In this event we paste it on a larger sheet of paper. For any size larger than the cap-size sheet of paper this method of folding will apply. We have used it for sheets as long as fourteen feet by eight feet wide, with equal success. One needs only a small amount of practice in order to make the fold of each blueprint accurate. Rough-edged blueprints should be trimmed before folding; this also eliminates the necessity of filing a great deal of waste paper.



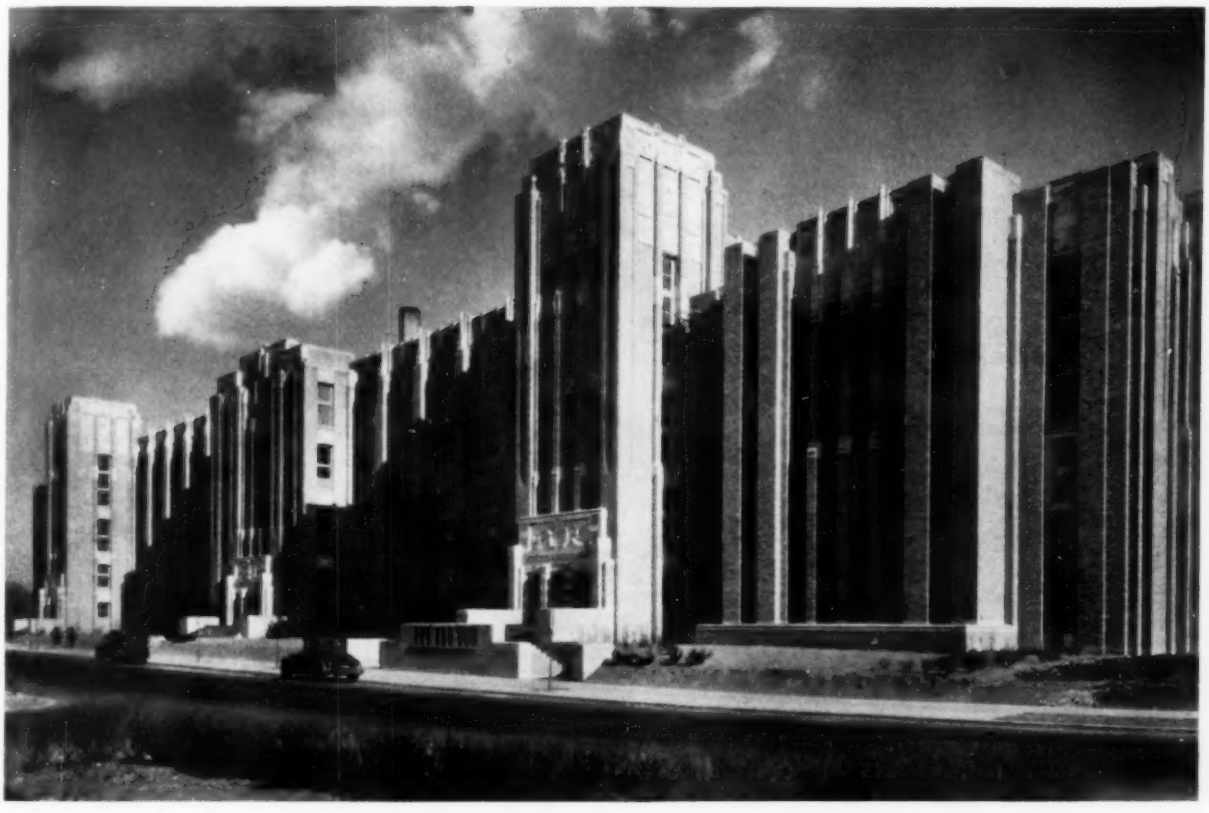
Label for Upper Right Hand Corner of Blue Print

DIAGRAM FOR FOLDING DRAWINGS AND BLUEPRINTS



A FOLDED BLUEPRINT READY FOR FILING

TECHNICAL NEWS AND RESEARCH



VON STEUBEN JUNIOR HIGH SCHOOL, CHICAGO
PAUL GERHARDT, ARCHITECT

PLANNING ELEMENTARY CLASSROOMS TO MEET PRESENT-DAY CURRICULUM DEMANDS
By Prof. N. L. Engelhardt

THE DEVELOPMENT OF THE JUNIOR HIGH SCHOOL IN CHICAGO
By Ralph W. Yardley, Architect

THE VON STEUBEN JUNIOR HIGH SCHOOL, CHICAGO
Paul Gerhardt, Architect

Chicago Architectural Photographing Co.

VON STEUBEN JUNIOR HIGH SCHOOL, CHICAGO
PAUL GERHARDT, ARCHITECT

PLANNING ELEMENTARY CLASSROOMS

By Prof. N. L. ENGELHARDT, Associate Director

Division of Field Studies, Institute of Educational Research
Teachers College, Columbia University

In recent years many significant changes have taken place in the planning of school facilities. The libraries, auditoriums and special laboratories of the high school have seen a greater adaptation of space and equipment to educational utilization. Administrative facilities of all types of buildings have been highly improved. In the kindergarten has been witnessed the transformation of mere space into a charming comfortable work and play place for children. The elementary classroom, however, remains today in large degree as it was incorporated into buildings twenty and thirty years ago. Probably of all spaces in school buildings devoted to educational purpose, the elementary classroom has seen the least significant change in the past twenty years. The reasons may be found in the slowness with which curricula have been altered, the hesitation to adopt new methods of teaching, and the unwillingness to substitute new educational activities for the old.

Elementary classrooms that are unattractive, unadorned and highly institutionalized in nature are to be found in large numbers. In part, the users of these classrooms, namely, teachers and administrators, may be responsible for the rather barren and formidable appearance of classrooms. In large measure, however, those who have planned the school buildings and the classrooms are responsible. There has been too great a tendency to accept the elementary classroom as a fixed and unchangeable phase of planning. Too little consideration has been given the adaptation of elementary classroom space to the changing needs of teachers or to the effort to make convenience and comfort serve elementary teachers to a maximum degree.

The spirit which has permeated teaching to an increasing degree during recent years has left its definite impress upon school building planning. The laboratory idea has been carried from the physical sciences into the social sciences, and into literature and the languages. It may be that as teaching becomes more highly developed, the mere classroom as such will have taken on more and more of the laboratory aspect. This, no doubt, would meet with the approval of the most progressive teachers. There are to be found in the United States modern language classrooms which, in large measure, reproduce the atmosphere of the country whose language is being taught. Here and there one finds the barrenness of the average mathematics room giving way to a room in which beauty and mathematics are combined. The music room sometimes takes the form of a little chapel. The household arts laboratories have been rapidly assuming a real home atmosphere. A changing appreciation of the results to be achieved in the educational process and a definite desire to make the class and laboratory facilities contribute toward that end have brought about these desirable changes in building planning.

The elementary classroom with three walls of blackboard, limited bulletin space and perhaps a cupboard or two surely does not present a very inviting appearance. Architectural skill has not been devoted in sufficient measure to the improvement of these boxlike rooms. To be sure, requirements of natural lighting and problems of ventilation and heating make the task difficult, but architectural genius should apply itself to making attractive these rooms in which young children are re-

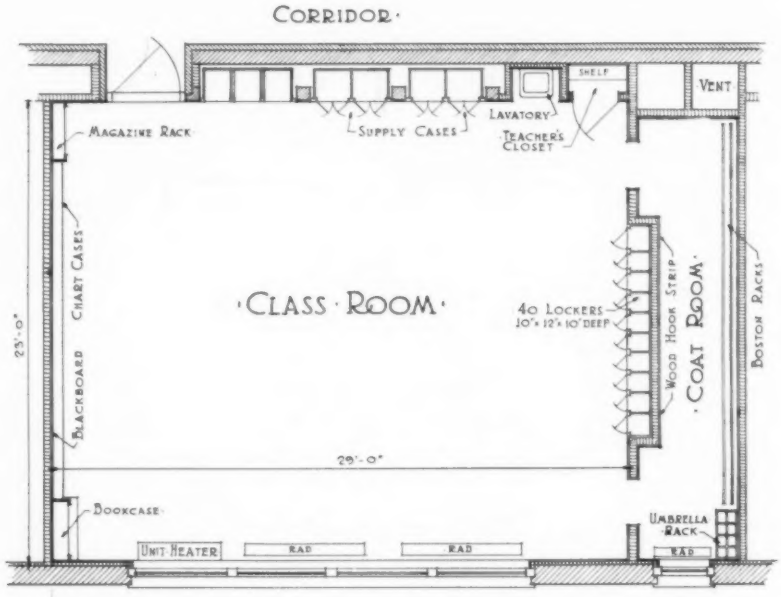
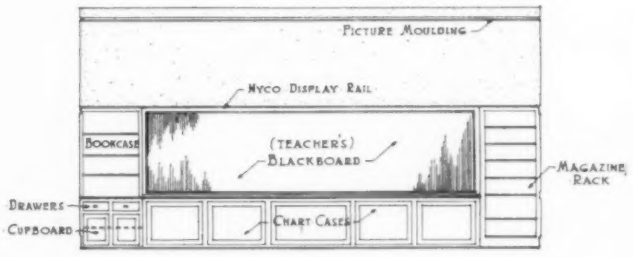
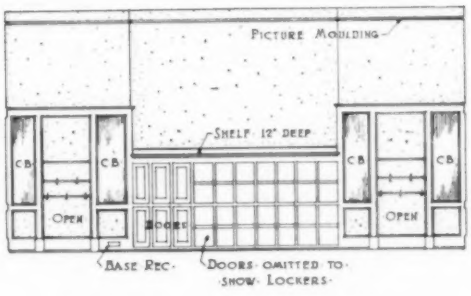


ILLUSTRATION No. 1



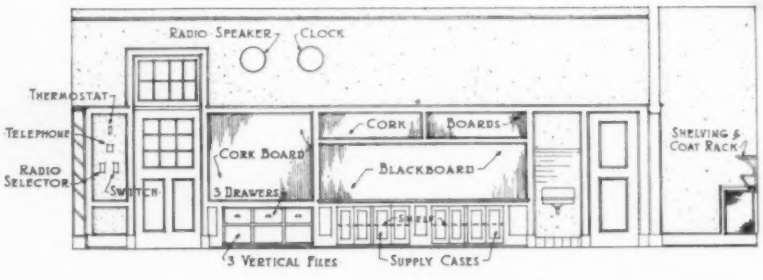
ELEVATION OF FRONT WALL

ILLUSTRATION No. 2



ELEVATION OF REAR WALL

ILLUSTRATION No. 3



ELEVATION LOOKING TOWARD CORRIDOR WALL

ILLUSTRATION No. 4

FISHER AVENUE SCHOOL, WHITE PLAINS, NEW YORK
STARRETT AND VAN VLECK, ARCHITECTS

quired to spend such a significant part of their early life. Costs must be kept down but barrenness and all repellent elements should give way to pleasurable surroundings.

A perusal of the 390-page volume on *Standard Equipment and Supplies for the Kindergarten, Grades I to VI, Inclusive, and Special Class of the Public Schools of Berkeley, California,*[1] will make clear why classrooms and kindergartens should be provided with far more shelving, cupboards and storage receptacles than has been given these rooms in the average planning. This volume on equipment demonstrates that the modern teacher is working with more of the real materials of life and is associating the learning processes with classroom activities in which materials of all kinds are being utilized. Under this modern program some very distinctive administrative problems arise, such as (1) making available materials of instruction, and (2) conserving teacher time for instructional purposes. Any planning of a classroom which will make teacher time more productive in terms of educational results will be highly welcomed by administrative officers and boards of education. It is reasonable to suppose that slightly additional cost put into the original planning of classrooms will be more than offset over a period of years by teaching made more effective as a result of availability of materials at time of need.

WHITE PLAINS PLAN

Illustration No. 1 shows a classroom developed in accordance with what might be called the White Plains plan. This classroom is one incorporated in the Fisher Avenue School, White Plains, N. Y., planned by Starrett and Van Vleck, architects, and George D. Strayer and N. L. Engelhardt, educational advisers to the Board of Education.

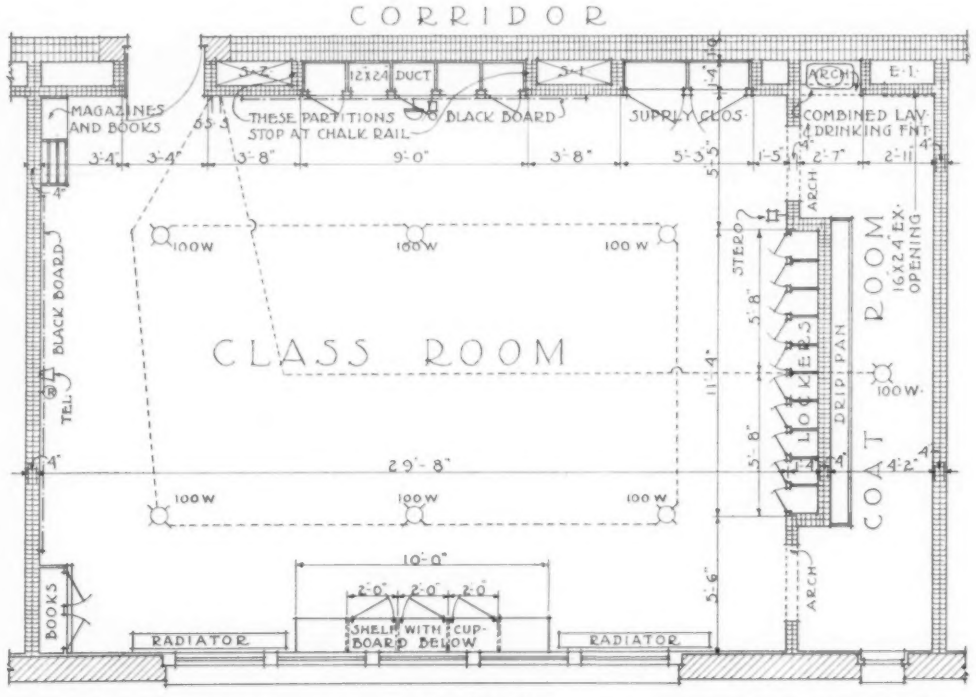
At the front of this classroom are bookcase and magazine rack, blackboard space and chart cases underneath. On the right side of the room are found vertical files with cork board above, a limited stretch of blackboard with shelves in cupboard arrangement below, a lavatory and a closet from floor to blackboard height. The rear of the room makes provision for 40 lockers 10″ x 12″ x 12″ deep so that each child in the classroom may be provided with his own receptacle space. Doors are furnished these lockers. Thus in this entire room will be found space for large charts and maps, for books and magazines, for the filing of tests and other letter-size paper, for the preservation of materials such as tools, baskets, grocery sets, card sets, card holders, clock dials, and many of the other similar materials to be found in the equipment list mentioned above. A lavatory makes possible the teaching of health habits, and the individual pupil lockers will tend toward orderliness and the recognition of the rights of all members of the social group.

The front wall of this room, in which the relationships between bookcase, drawer space, cupboard space, chart cases and magazine rack appear, is shown in Illustration No. 2. Note the display rail making possible rapid adjustment of hooks for the display of maps or charts.

In Illustration No. 3 will be found the rear wall of this classroom, with its individual lockers, its base receptacle for stereopticon or sound pictures, and its cork board bulletin spaces on either side of the openings to the cloak room. The locker spaces have permitted a recess in the rear wall which may be made into an attractive nook and may vary from room to room according to the desires of teacher and pupils.

As shown in Illustration No. 4, the space between the door and the front wall is used for the placement of thermostat, telephone and radio selector, while the radio speaker itself takes a position near the clock and may be expected to draw even more pupil attention than the clock has done in the past.

[1] Smith, Lewis W., Superintendent of Schools, and Minor, Ruby, Director of Kindergartens and Elementary Education. Berkeley Public Schools, Berkeley, Calif. June, 1929.

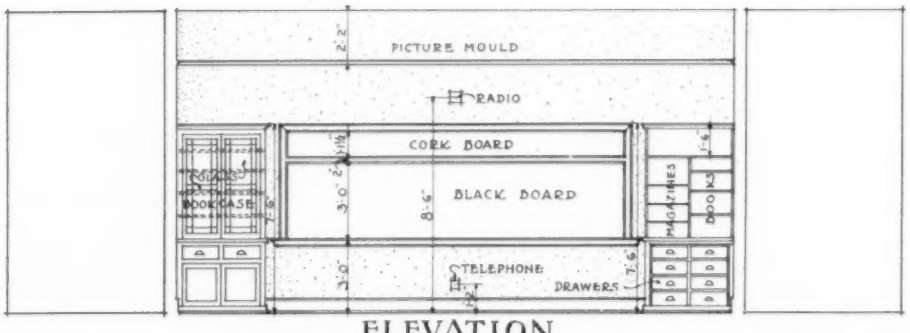


·TOOKER·&·MARSH·ARCHITECTS·
·101·PARK·AVENUE·NEW·YORK·CITY·

TYPICAL PLAN

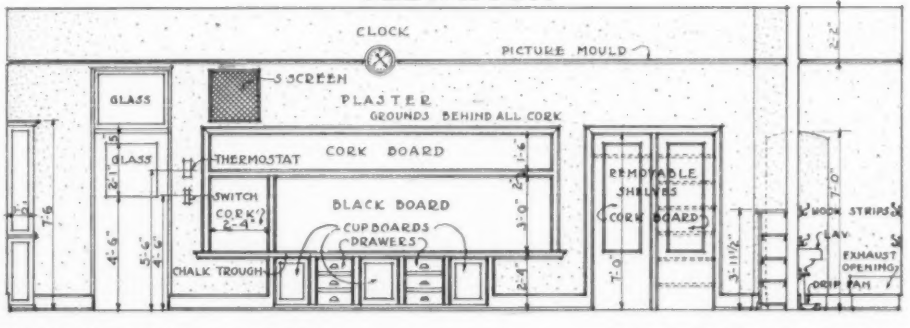
·GLENMORE·DRIVE·GRADE·SCHOOL·
·NEW·ROCHELLE· ·NEW·YORK·

ILLUSTRATION No. 6



ELEVATION

ILLUSTRATION No. 7



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ELEVATION

·GLENMORE·DRIVE·GRADE·SCHOOL·
·NEW·ROCHELLE· ·NEW·YORK·

ILLUSTRATION No. 8

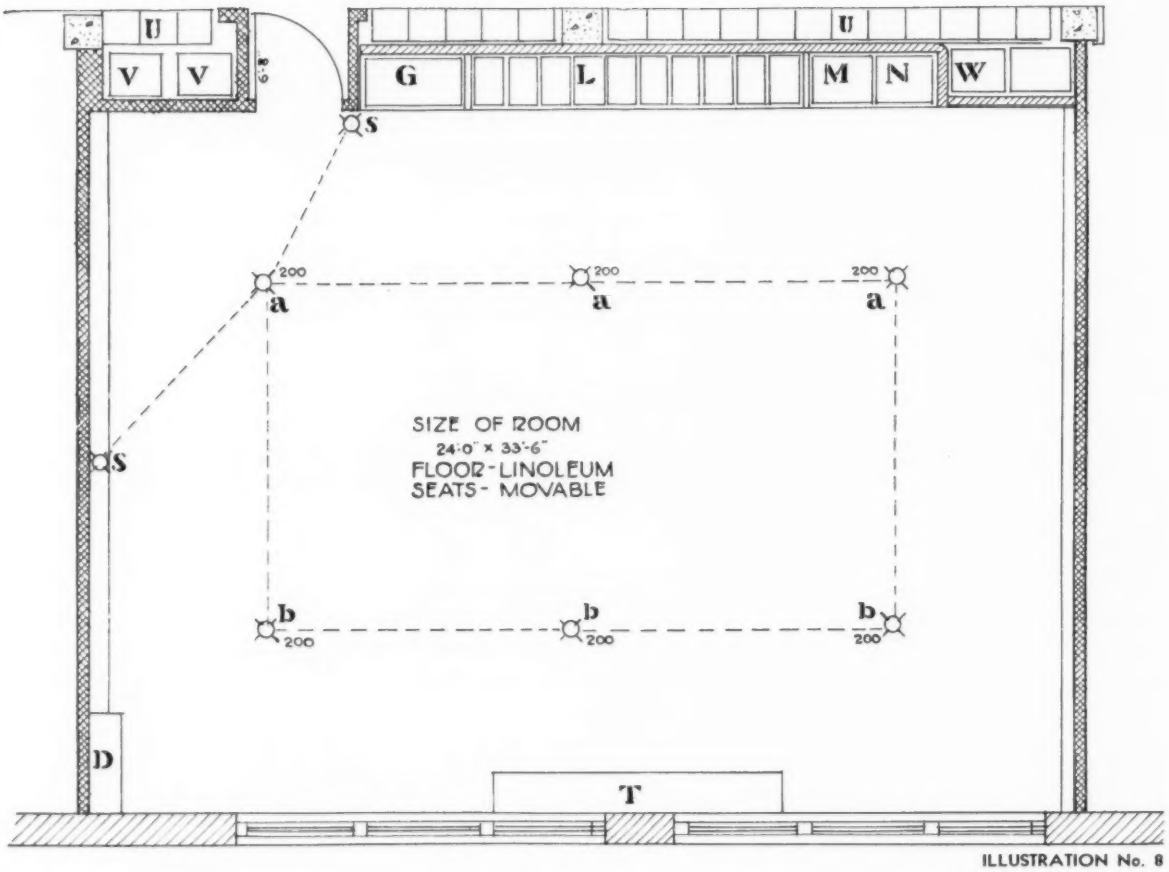


ILLUSTRATION No. 8

ELEMENTARY CLASSROOM, NEW OYLER SCHOOL, CINCINNATI
SAMUEL HANNAFORD AND SONS, ARCHITECTS

A = Teacher's blackboard: 3′ 6″ x 17′ 0″—set 2′ 9″ above floor.

B = Pupil's blackboard: 3′ 0″ x 19′ 0″—set 2′ 4″ above floor.

C = Corkboard on walls and doors as indicated.

D = Book case: 19 feet of shelving.

E = 4 floor cases for charts and posters: 28″ x 48″ x 4″ inside.

F = Magazine display rack: 19 feet of display.

G = Storage case: adjustable shelves—42″ x 19″ x 42″ high inside.

H = 2 drawers: 19″ x 18″ x 7″ high inside.

I = 2 vertical files: 19″ x 18″ x 14″ high inside.

K = Picture space 11′ 3″ long; recessed 8″ over mantel 10′ wide—top 4′ 3″ above floor.

L = 40 pupils' cupboards: 12½″ x 19″ x 10″ high inside; door for two.

M = Closet for lavatory and bubbler: 24½″ x 19″ x 75″ high inside.

N = Teacher's closet: 24½″ x 19″ x 75″ high inside.

O = 6 windows: sill 3′, or more, above floor—top of glass 12′ 0″ above floor; ceiling as close to top of glass as possible to increase reflection; 2 shades to each window, hung at meeting rail; glass deflectors at 4 windows over radiators.

P = 4 supply cases under window shelf: adjustable shelves; 24″ x 12″ x 34″ or more high inside.

Q = Picture molding 20″ below ceiling.

R = Map and display rail: 17′ long.

S = Electric wall plug for lantern.

T = Window shelf: 16″ wide x 10′ 0″ long.

U = 20 corridor lockers: 15″ x 15″ x 60″ with 2 shelves near top—set on sanitary coved base.

V = Vents: ducts 18″ x 24″.

W = Air supply: ducts 18″ x 24″.

NEW ROCHELLE PLAN

Another variation in elementary classrooms may be called the New Rochelle plan because of its incorporation in the Glenmore Drive Grade School, New Rochelle, N. Y., by Tooker and Marsh, architects. Illustration No. 5 shows this classroom, with bookcases, magazine rack, drawer spaces, telephone and radio at the front part of the room. At the right will be found blackboard, cork board, file spaces, and coat and supply closets. To the rear are the pupil lockers with arched openings to the coat room. In the coat room is a lavatory and provision for coats and umbrellas. On the window side, in between the radiation, is shelving with cupboards below.

Illustrations Nos. 6 and 7 show the front and corridor side elevations of these classrooms. Teachers working in these rooms have every opportunity of storing materials which they use and are invited, because of the arrangement of the room, to bring in materials which they might not otherwise provide. Rooms like this may also become exceedingly attractive and homelike, and in their atmosphere tend to develop desirable qualities in children.

CINCINNATI PLAN

Some of the initial planning looking forward to the change of elementary classrooms was done in Cincinnati under the direction of Superintendents Condon and Roberts with Dr. Clarence Kingsley as educational adviser. Illustration No. 8 shows the Cincinnati plan incorporated in the New Oyler School for which Samuel Hannaford and Sons of Cincinnati were the architects and George D. Strayer and N. L. Engelhardt, educational advisers. Here the elementary classroom has been enlarged to incorporate the cloak rooms. This was done in order to meet the requirements of elementary school teachers for space which might more readily adapt itself to complete laboratory purposes. Instead of cloak rooms, locker spaces are provided in the corridors. The complete built-in equipment of this room is listed in the accompanying table.

The Cincinnati plan, the White Plains plan and the New Rochelle plan represent the earnest purpose of meeting the insistent demands of the new elementary school curriculum. Further progress is possible in this field and should be encouraged.

"SCIENCE"

"THE DIG"

"MECHANICS"

PANELS, VON STEUBEN JUNIOR HIGH SCHOOL, CHICAGO
PAUL GERHARDT, ARCHITECT

THE DEVELOPMENT OF THE JUNIOR HIGH SCHOOL IN CHICAGO

By RALPH W. YARDLEY, Assistant Architect, Chicago Board of Education

The junior high school is a comparatively recent development in educational procedure. In the days of the Colonies there were no established standards or commonly accepted routines. The principal aim in education was to teach pupils to read or to give them a training in the three "R's." Colleges were provided for those studying for the ministry, but there was no uniformity or standardization of secondary education. It was not until Horace Mann went to Germany and studied the thoroughly organized Prussian system that any attempt was made to provide a uniform system of education in the United States. The many and voluminous writings of Horace Mann so thoroughly established the so-called "Eight and Four" system, comprising eight years of elementary school and four years of high school, that no attempt was made to develop anything new until 1913. The "Eight and Four" system contained a decided gap educationally. There was such a definite difference in the kind of teaching received in the elementary school from that of the high school as to create the feeling that the education of the High School was a separate training and possibly unnecessary. The objection to this system of study arose because of a change of economic conditions which created a demand for a broader education within a shorter period of time. In 1913, the National Education Association appointed a committee headed by Dr. William B. Owen, then President of the Chicago Normal College, for a report on the Reorganization of Secondary Education. This report was not presented until 1918 and its recommendation which forms the basis of the junior high school system is contained in a paragraph known as the Magna Charta of the junior high school movement, which is as follows:

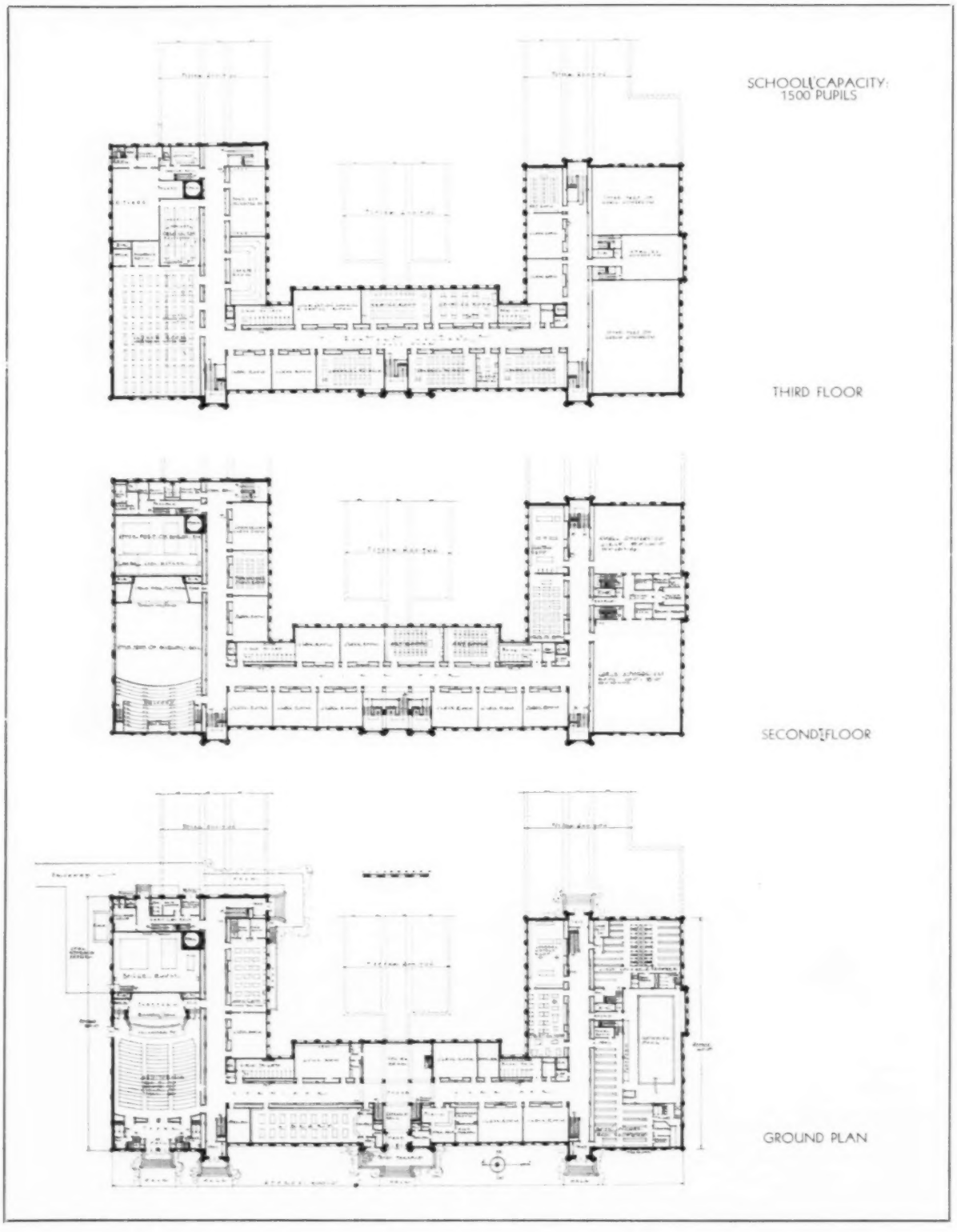
> "We, therefore, recommend a reorganization of the school system whereby the first six years shall be devoted to elementary education designed to meet the needs of pupils of approximately six to twelve years of age. The six years to be devoted to secondary education may well be divided into two periods which may be designated as the junior and the senior periods. In the junior period emphasis should be placed on the attempt to help the pupil explore his own aptitudes and to make at least provisional choice of the kinds of work to which he will devote himself. In the senior period emphasis should be given to training in the fields thus chosen."

Following the report of this committee, the junior high school scheme was tested in various parts of the country. Chicago was slow to adopt the recommendation although it was originally sponsored by a Chicago educator. In 1926, Chicago completed its first school building especially planned for junior high school work. This building was fairly satisfactory but was two stories in height, and there was an excessive amount of ground required in proportion to the number of pupils accommodated. It was apparent that this school was not as good for its purpose as could be provided, and before any other buildings were erected arrangements were made for an exhaustive study of building facilities in junior high schools which had been erected throughout the United States. This investigation was of the most thorough character and was carried on simultaneously by officials of the Educational Department of the Chicago Public Schools and the Architectural Department of the Chicago Board of Education.

Completion of these studies revealed that there were no definite standards established to date throughout the country in connection with the planning and designing of junior high schools as was the case in connection with elementary and senior high schools. This lack of definite standards and uniformity not only applied to building arrangements but even applied to matters in connection with room layout and equipment. The changing over of a system of educational procedure in a large city involves the construction of many new buildings, and in order to avoid mistakes it was decided to pay no attention to what had been done in the past in Chicago or elsewhere, and to work out plans which would be built around the course of study established for the junior high schools. This course of study had been tested over a sufficient period in old buildings which were being used for junior high school classes to establish the proper curricula.

PUPIL CAPACITY UNITS

The needs of a great city as to the number of pupils to be accommodated in buildings vary in different sections of the city. The junior high school course is the same in all sections of the city regardless of



TYPICAL PLANS FOR A JUNIOR HIGH SCHOOL
CHICAGO BOARD OF EDUCATION
PAUL GERHARDT, ARCHITECT

the number of pupils. A section of the city needing a small initial unit may develop into a densely congested residence district. It was, therefore, decided to develop plans for junior high schools which would be similar in all cases in their general arrangmeent of rooms and in the educational facilities which were provided, but which would be of such sizes as to accommodate units of 1500, 2000, 2500 and 3000 pupils. The latter size was to be the maximum in capacity and units of lesser pupil capacity were so planned that they could be enlarged to the maximum by building additions to the original building without any major alterations in the original building.

A series of plans were developed after a long period of research and study. A school of each type was built, and as soon as completed it was thoroughly inspected and checked architecturally and educationally down to the minutest detail for items needing corrections or improvements in future buildings. Such items were altered in the succeeding building, and checking and inspections of buildings completed within the last two years have shown practically no need for any change.

CURRICULUM DEMANDS

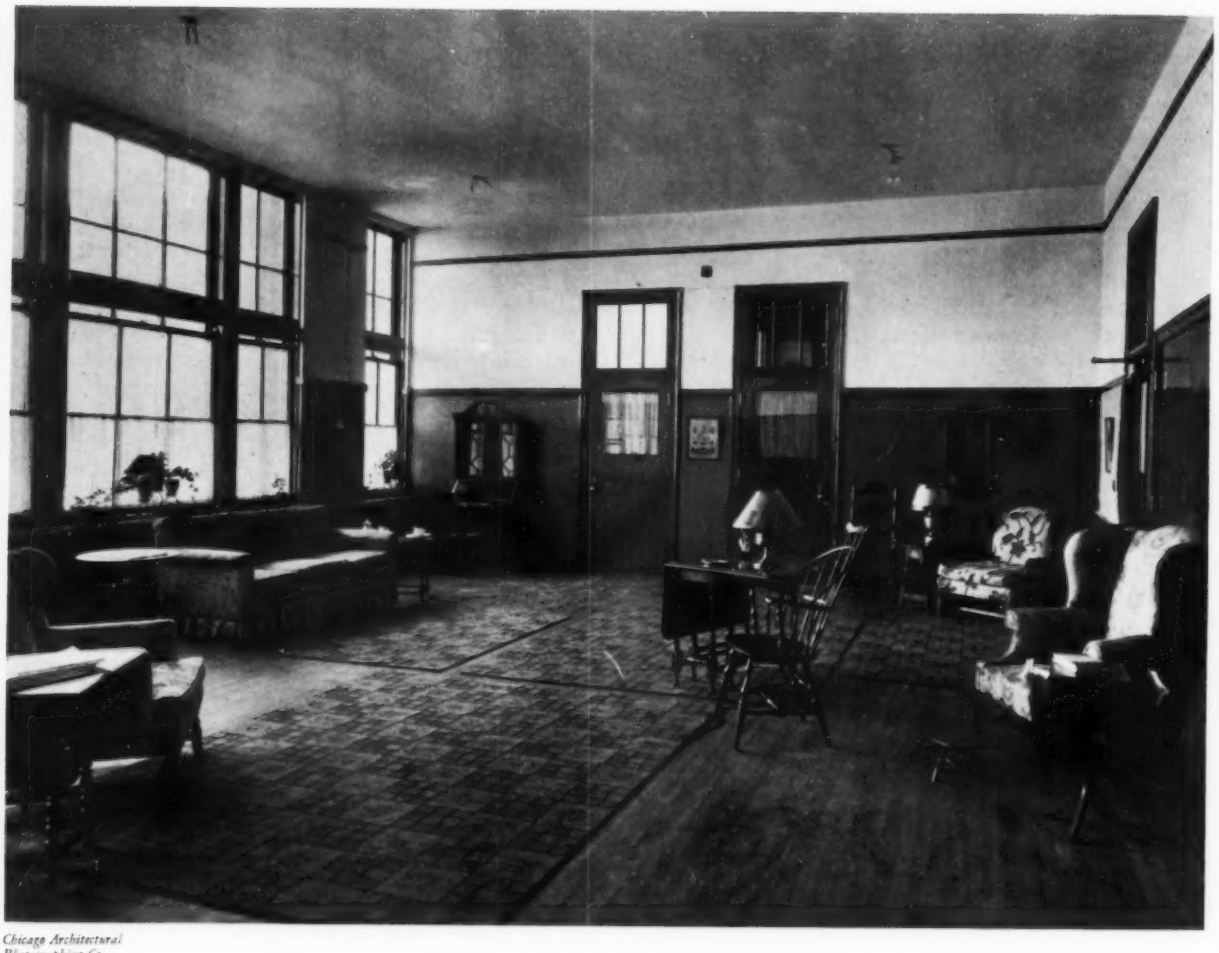
An elementary school pupil receives principally academic training with possibly a little manual training for boys and domestic science for girls. The seventh or eighth grade pupil who attends a standard junior high school has opportunities to study courses in general science, electrical shop work, printing shop work, general metals shop work, typewriting, stenography, and sometimes other similar special courses, depending on the location of the school. All junior high schools provide for instruction in advanced musical training and provisions for school bands, orchestral and glee clubs have to be provided. Training in library work is given under the supervision of a trained librarian. Swimming, special gymnasium work to remedy minor physical defects such as those of posture, and inter-school physical contests are provided. None of these has ever been provided in elementary schools and facilities have to be provided for them in the junior high school building. Provisions made for such activities will permit these activities to be a continuation of elementary school instruction instead of a separate type of training as was the case in connection with such activities in the senior high schools. The pupil or his parents have some choice in the course of study to be pursued during the junior high school period so as to fit the training to the special needs, aptitudes and interests of each individual instead of all pupils having to take one more or less fixed course of study. This provision for elective studies provides an additional difficulty in satisfactorily arranging the building for the most effective programming of the school.

PLANNING FOR DEPARTMENTALIZATION

The plans are developed to provide for the departmentalization of the school. This division results in the most efficient supervision of instruction in the various departments. The buildings are also designed so that they may, if desired, be used as social centers outside of school hours and so that they may be used whenever desired by the public. The auditorium may be shut off from the rest of the building and used for public gatherings even during school hours. The athletic section of the building is arranged in a unit so as to be available for community activities at times when school is not in session. The library is standard for all schools and is placed on the front of the building with a separate exterior entrance so that it may be used as a branch library and reading room of the city library system when not used by the school. It seats 120 persons. The administrative section of the building is placed close to the main entrance and adjacent to the section used for social activities in order to provide facilities for the Parent-Teachers Association and other civic groups interested in the school's welfare. Lunchrooms, which have a capacity of one third of the school membership, are placed in an upper floor of the building so that they may be skylighted and used for study rooms, and in order to permit the pupils having the utmost freedom during their lunch period without interfering with portions of the building used for instruction purposes. The room used for band and orchestral instruction is placed in a position in the building where the work does not annoy those working in other branches. This room and rooms used for musical instruction are separated from corridors by vestibules and have walls and ceilings treated with sound-absorbing materials.

CONSTRUCTION

All standard junior high schools are three stories high and classified as "fireproof" under the severe requirements of the Chicago Building Code. Auditoriums in all junior high schools seat 800 to 900, being built for the ultimate maximum capacity of the school. The "large" gymnasium which is used by boys is 60 by 100 feet. Gymnasiums for girls are kept within a floor area not exceeding 3000 square feet, one gymnasium being provided in the smaller units and two in the larger ones. The natatorium is placed between the boys' and girl's locker- and shower-rooms in order to provide one swimming pool for the whole building. Swimming pools are 24 feet wide and 60 feet long in all the buildings and are equipped with filters and chlorine injectors. The walls of gymnasiums, locker- and shower-room, and natatorium, are of glazed brick and the ceilings in gymnasium and natatorium are treated with sound-absorbing materials. The floors

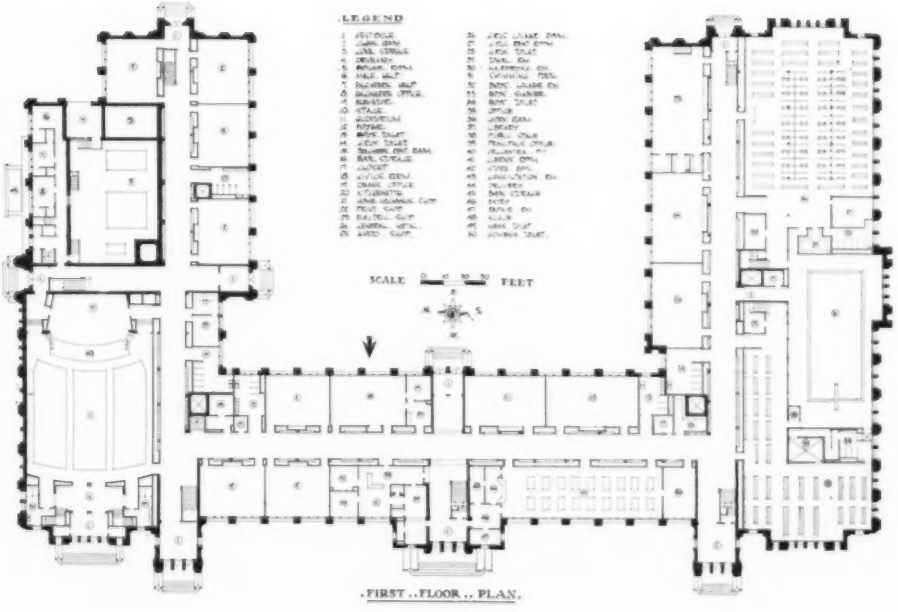


Chicago Architectural Photographing Co.

CIVICS ROOM

VON STEUBEN
JUNIOR HIGH
SCHOOL, CHICAGO

PAUL GERHARDT
ARCHITECT



FIRST FLOOR PLAN

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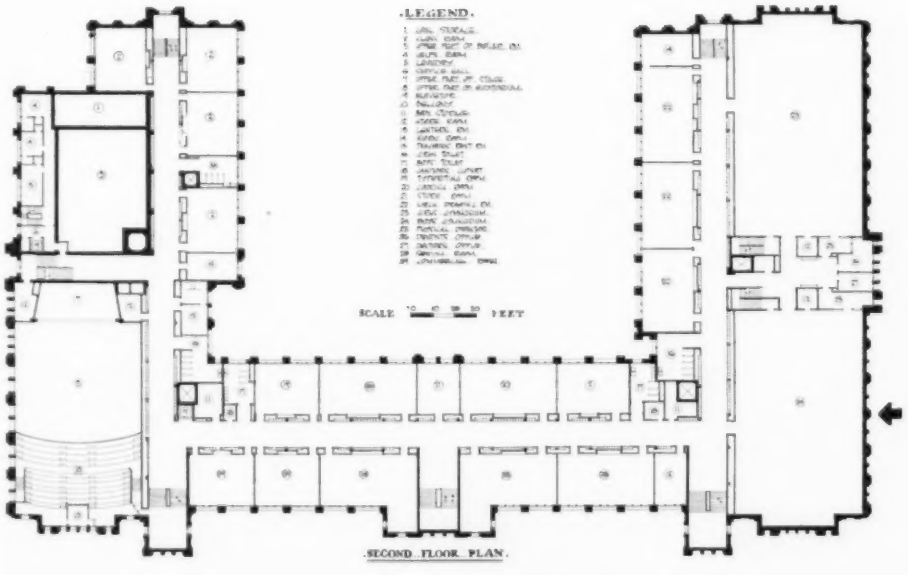
BOYS' GYMNASIUM



SECOND FLOOR PLAN

VON STEUBEN
JUNIOR HIGH
SCHOOL, CHICAGO

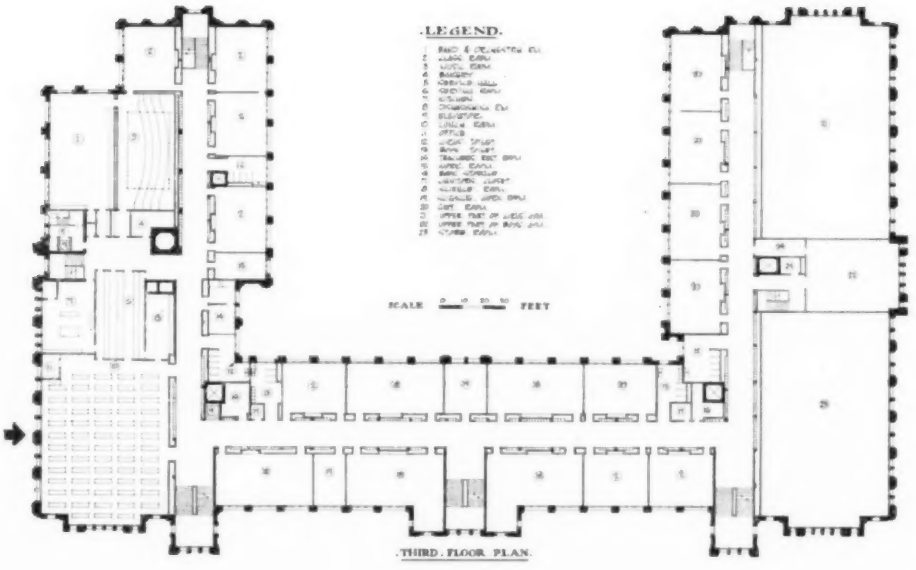
PAUL GERHARDT
ARCHITECT

Chicago Architectural Photographing Co.

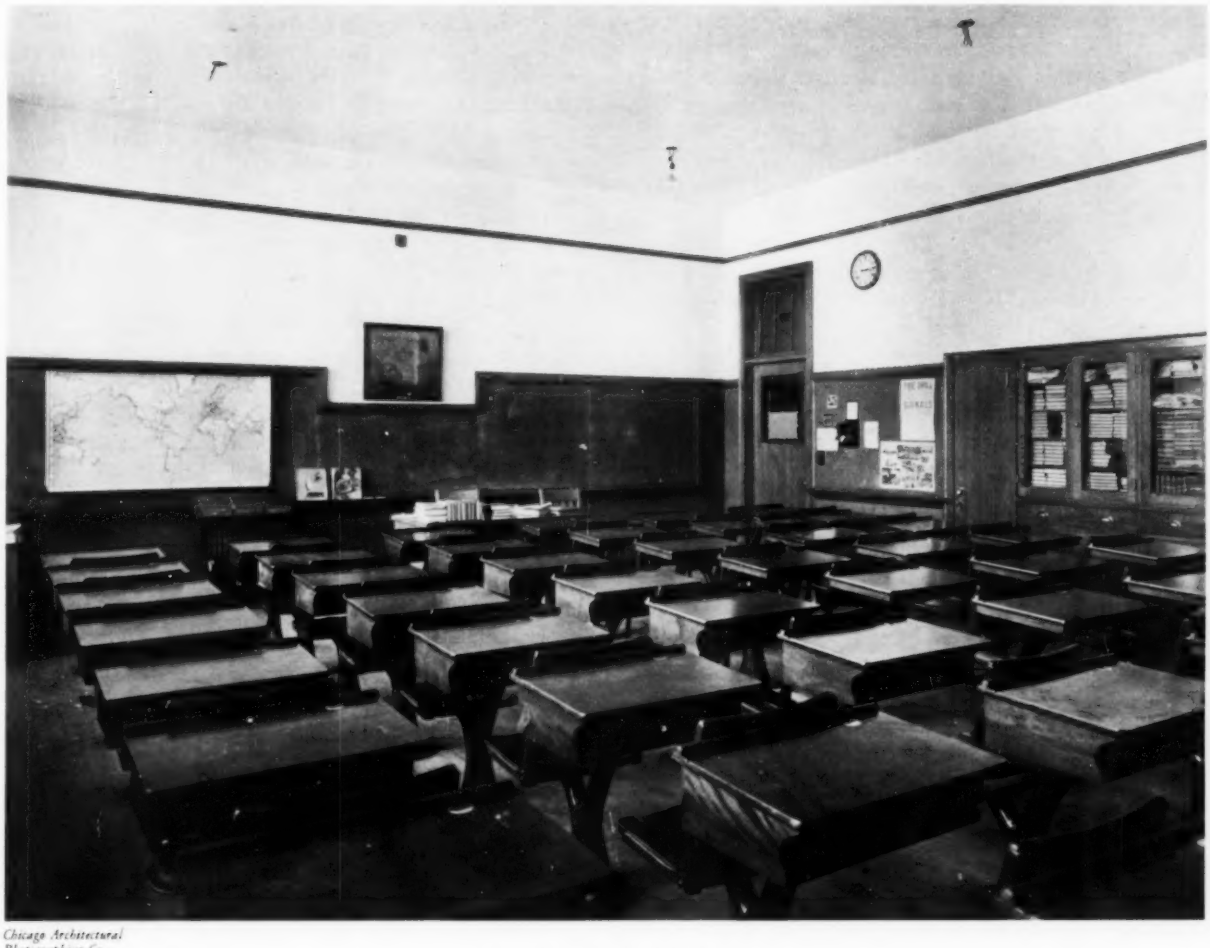
LUNCH ROOM

VON STEUBEN
JUNIOR HIGH
SCHOOL, CHICAGO

PAUL GERHARDT
ARCHITECT

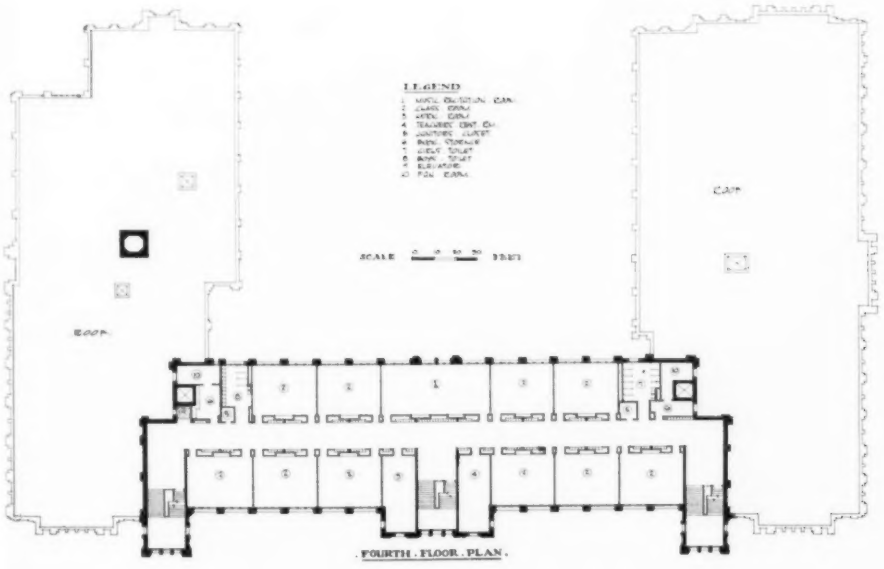


THIRD. FLOOR. PLAN.



Chicago Architectural Photographing Co

TYPICAL CLASS ROOM



VON STEUBEN JUNIOR HIGH SCHOOL, CHICAGO

PAUL GERHARDT ARCHITECT

of the natatorium and locker-rooms are of non-slip tile. A medical suite containing offices and examination rooms is provided for the use of the school doctor, school dentist and school nurse. This suite is placed so as to be used in connection with the remedial gymnasium and is adjacent to the offices of the physical directors in charge of boys and girls. Art rooms and mechanical drawing rooms are placed to receive north light. All regular classrooms face either east or west so as to receive some sunshine during the day. Gymnasiums and natatoriums are placed at the south end of the building for the same reason. Buildings are heated and ventilated by a straight blast system providing an equal distribution of fresh washed warm air except that rooms used for band, orchestra or chorus, are equipped with special unit ventilation to prevent any possibility of noise being transferred to other parts of the building through ventilation ducts. Toilet rooms have glazed brick walls, tile floors and marble toilet stalls. Corridors are 14 feet wide and lead directly to a stair at each end. There are no dead ends to any corridors. All rooms have two exits. Recessed steel lockers in the corridor walls are used throughout. The walls of corridors between lockers are glazed brick from the top of the base to the top of the lockers. Base and border in corridors are of terrazzo and the field of the floor is of mastic tile.

The interior arrangement and equipment rooms in all junior high schools is the same, the variation in size being taken care of by the number of rooms provided for the various purposes for which the rooms are used. This standardization of facilities has been found to increase the efficiency of the instruction. The standardization of the junior high school stops with the arrangement of the building, the interior finish and the equipment. The exteriors of the schools vary, depending upon the neighborhood in which they may be placed, the size of the site and the character of their surroundings. It is necessary to place some buildings in proximity to business property, while some are placed in districts filled with tall apartment buildings, and others are in suburban territory surrounded by bungalows. The exterior design of the building in each case is designed to suit the particular location.

VON STEUBEN JUNIOR HIGH SCHOOL

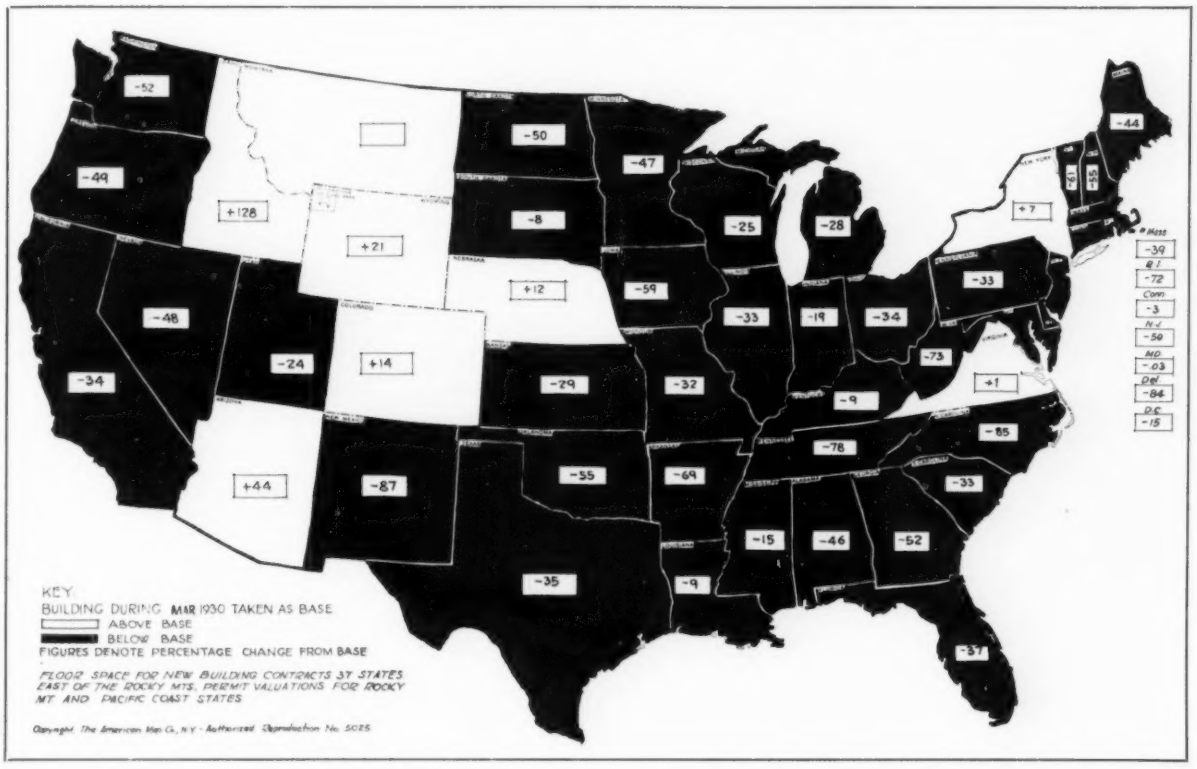
PAUL GERHARDT, Architect, Chicago Board of Education

The Von Steuben Junior High School varies slightly from the standard plan used for junior high schools of varying capacity in Chicago. A height of four stories was necessary because of the restricted area of the site and the need of providing a school with a capacity for 2500 pupils. The principal departure from the standard plan is in the shortening of the building and in the placing of the classrooms, thus eliminated, on the additional fourth floor of the building.

The site is irregular in shape and adjoins an attractive neighborhood park which is landscaped and which is provided with a field house. The north branch of the Chicago River winds past the school and the park at one end of the building, and the city streets have been rerouted around the building to permit the building and the park to form a minor community center which displays the building to the best advantage. The street in front of the building is practically a boulevard and the surroundings are tall apartment buildings.

The structure is built of varying shades of buff brick, ranging from tan to dark brown. Terra cotta trimmings have been used sparingly. The use of moldings, stereotyped ornament and conventional designs has been eliminated and sculptured terra cotta of architectural and educational significance has been used instead. Grotesques, masks and symbolical figures which have been used in the panels have either a general or special significance. All these are different.

The interior finish and equipment throughout are similar to that provided in all of the Chicago junior high schools.



The March building map showed only three states east of the Rocky Mountains where contracts on a floor space basis were larger than in March, 1930: New York, Virginia, and Nebraska. In addition five states in the Rocky Mountain district, based upon partial data showed March permit valuations above March of last year. From the standpoint of number of states to show improvement in contracts the March map was less favorable than the February map which showed six states east of the Rocky Mountains with floor space totals higher than in February 1930.

BUILDING TRENDS AND OUTLOOK

PROSPECTS FOR CONSTRUCTION OF SCHOOL BUILDINGS

By L. Seth Schnitman

The construction of new schools and colleges in 1930 accounted for almost 20 per cent of all non-residential undertakings. During that year schools and colleges were of greater importance to the construction industry than factories by almost 50 per cent. In fact, no single class of non-residential building except commercial buildings showed for 1930 as large a total as schools and colleges. Quite naturally then the construction trend of schools and colleges is of large significance to the architect.

With but few interruptions the trend of contracts on a valuation basis was downward from January, 1926, to early 1928, inclusive. During this period the curve depicting total construction of all types was about horizontal, with slight indications of an incline. This was the period when business generally was marking time in an advancing march.

During the latter part of 1928 new contracts for schools and colleges exhibited an upward trend but failed to attain the level from which they had fallen in 1926. At the same time construction of all kinds advanced to an all-time peak which culminated at the end of 1928.

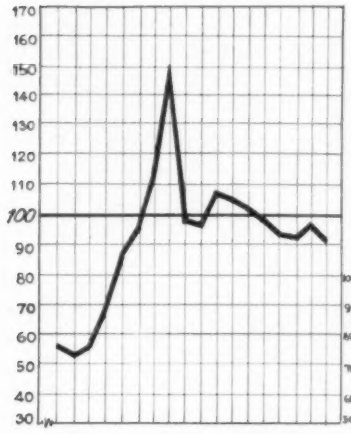
Schools and colleges too, showed a sympathetic decline at the end of 1928. This decline continued throughout 1929. But unlike the curve for general construction, schools and colleges showed a sidewise movement in 1930 while the toboggan in construction continued.

What is next for schools and colleges is difficult to say, but indications, judging from the first quarter record of contracts, are not too unpromising. Although the record for February and March pointed

(Continued on page 92, advertising section)

WHOLESALE PRICES FOR BUILDING MATERIALS

1926 Monthly Average = 100

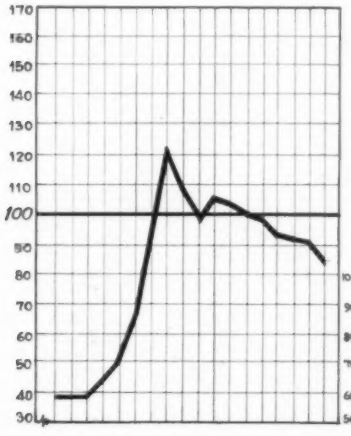


GENERAL INDEX

Prices (on partial data) showed a slight recession in April. The index was still substantially above the general level of other commodities at wholesale.

LUMBER

No present indications of any sustained recovery from present levels are apparent; prospects rather favor further declines.

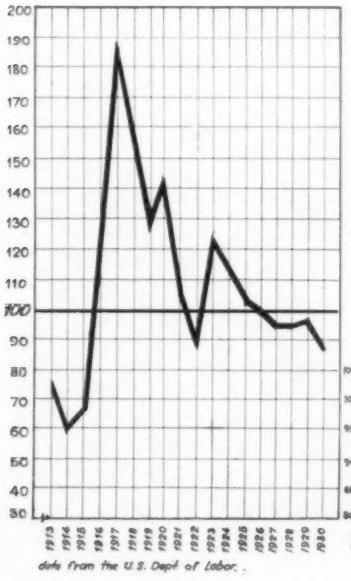


BRICK

Brick prices have remained rather stable during the first quarter of 1931; though on a lower level than a year ago some further recession seems imminent.

CEMENT

Despite large demand for highway construction lower building construction has operated to reduce prices. Further price recession will likely occur as year progresses.



STRUCTURAL STEEL

Steel prices have yet to test present levels, with further large declines indicated for commercial and factory building. Present indications point to probable declines in steel prices.

OTHER MATERIALS

The general trend of other building materials will probably be downward for next few months.

data from the U.S. Dept of Labor.

THE NEW JERSEY BELL TELEPHONE COMPANY'S *building at Newark. The architects — Voorhees, Gmelin & Walker — specified Barreled Sunlight for interiors of this handsome building.*

Interiors *of the* New Jersey Bell Telephone Building

are painted for lasting beauty and cleanliness

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PAINTED surfaces in the recently completed building of the New Jersey Bell Telephone Company at Newark, N. J., are distinguished by a finish of flawless smoothness, rich lustre and pronounced depth.

In this handsome structure, as in many others of comparable distinction, Barreled Sunlight was specified for interior painting.

The growing preference for Barreled Sunlight is readily explained by its combination of good looks and sturdy wearing qualities, characteristics essential to satisfactory service in the modern building.

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Our complete catalogue is in Sweets, but for your own files we would like to send you our booklet, "For Interiors of Lasting Beauty and Cleanliness."

. . .

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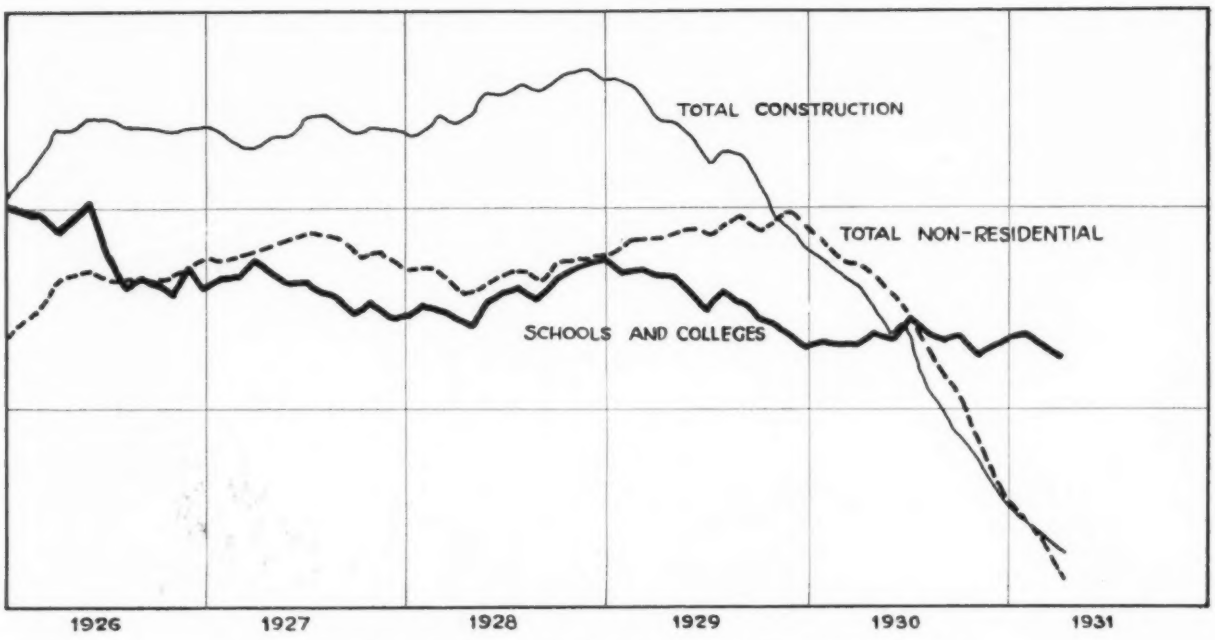
Barreled Sunlight

Reg. U. S. Pat. Off.



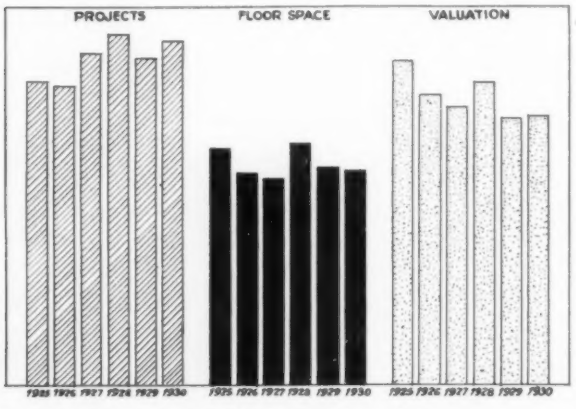
TREND OF BUILDING: SCHOOLS AND COLLEGES, 37 EASTERN STATES

A comparison with the trends in non-residential building and construction as a whole.

(*Continued from page 443, editorial section*)

downward, the decline is inconclusive. When contrasted with the trends of the curves for total construction and non-residential building, the showing is not particularly unfavorable.

Nevertheless it appears quite definitely that the valuation of new contracts for schools and colleges to be placed during the remaining months of the year will fall below the totals for the corresponding months of last year. This is reasonable because the stimulus of new educational work for which contracts were placed during 1930 to alleviate the unemployment problem has apparently spent itself largely.



Trend of Building: Schools and Colleges, 37 Eastern States

A comparison between number of projects, floor space, and valuation.

The deep depression in business has made increasingly difficult the obtaining of moneys for new private college buildings. It is likely that the latter months of the year may reflect this condition. In spite of this, it is almost certain that new school and college building will fare much better in 1931 than commercial or factory building, for which further large losses are definitely indicated.

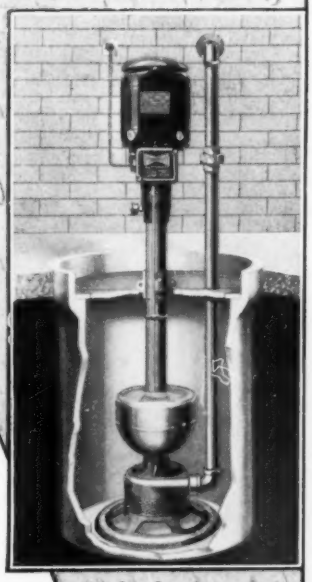
It is of interest to note that 1928 was the year which showed the largest number of school and college projects. From this standpoint 1930 was second only to 1928 of all the years since 1924.

From a floor space basis 1928 likewise was the banner year. The year 1930, however, was in this case of less importance than 1925 or 1928 and only slightly exceeded 1926. Where, on a project basis, 1930 was higher than 1929, from the standpoint of new floor space 1930 was somewhat under 1929.

From the standpoint of valuation, contracts for new schools and colleges were at their peak in 1925. Though on this basis 1930 was higher than 1929, it was lower than any other year since 1924.

In view of these facts it is quite probable that for 1931 the number of projects may exceed those for 1930, but it is doubtful whether either floor space or valuation can show gains over last year.

when it **RAINS**
and **RAINS**
and **RAINS**



Penberthy Automatic Electric Sump Pump

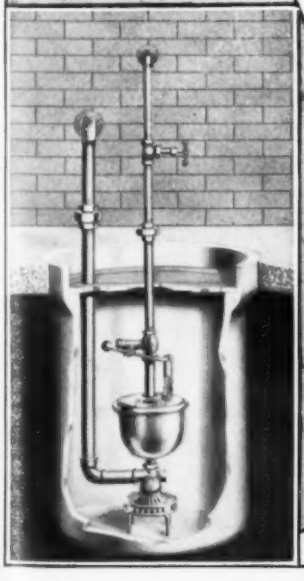
A Dry Basement

ALTHOUGH this home was built in a new subdivision that is without sewerage facilities, its owner will never be troubled with a wet basement, no matter how hard or how long it rains. The architect had it equipped with a Penberthy Pump that handles all basement seepage and drainage quickly and quietly.

Both the electric and water operated pumps are immune to corrosion . . . they are copper and bronze throughout. Both are automatic and thoroughly dependable under the most severe operating conditions; they are economical of electricity and water power. Both have a minimum space requirement and are easy to install.

Penberthy Pumps are quickly available from the stocks of leading jobbers throughout the country.

Penberthy Automatic Cellar Drainer (Water Operated)



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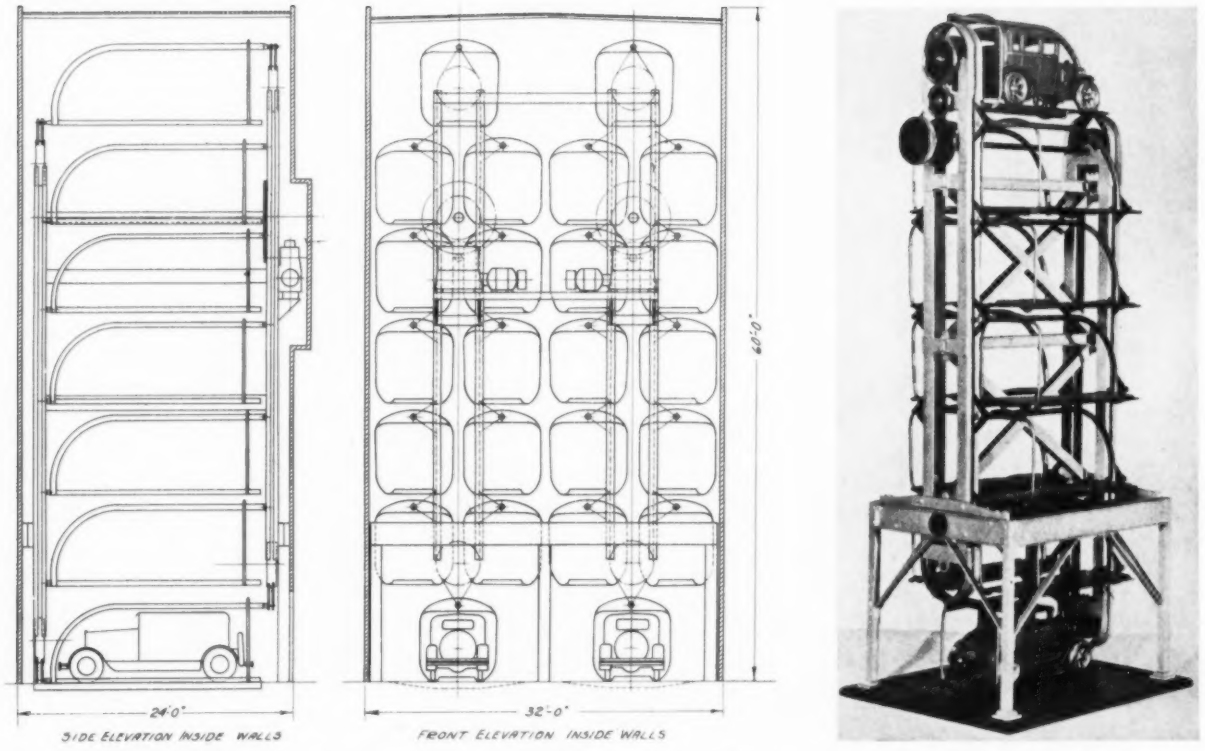
Established in 1886

PENBERTHY PUMPS
PREVENT FLOODED BASEMENTS

PENBERTHY PRODUCTS



Detail drawings and model of vertical parking machine developed by the Westinghouse Electric and Manufacturing Company. Each machine has spaces for twelve automobiles 18 feet long. Additional spaces can be added in pairs.

NEWS IN BRIEF

VERTICAL PARKING MACHINE

An automatic parking machine, which allows the parking of twenty-four automobiles on a ground space little larger than that required by an ordinary double garage, has been developed by H. D. James, consulting engineer of the Westinghouse Electric and Manufacturing Company.

This machine consists of cradles, one for each car, supported between two endless chains which pass over sprocket wheels at the top and the bottom of travel; the chains are driven by two electric motors, and, by means of a push-button control (or its equivalent), any cradle can be brought quickly to the driveway level for receiving or discharging an automobile.

Three general methods, all of which use substantially the same control but different master switches, are used for operating the parking machine.

First is the key system, best suited for garages where spaces are rented for a fixed time, say for a month. Outside the garage is a panel having several numbered locks, one for each parking space, and a lock for opening and closing the door. Each tenant is provided with a key, which, when inserted in the lock for his particular space, and turned at right angles, dispatches that cradle to the driveway, and permits the tenant's taking his key from that lock and inserting it in the door lock. When the key inserted in the door lock is turned ninety degrees, or sideways, it establishes a circuit to automatically open the door as soon as the cage is level with the driveway. While the driver is engaged in driving his car "on" or "off," the key remains in the door lock preventing anyone else from operating the machine while the driver is inside the enclosure. When the automobile has been driven "on" or "off" and the tenant is ready to leave, the key is turned to the vertical position in order to remove it from the lock. This, by establishing another circuit, closes the doors, leaving the machine ready for use by the next tenant.

Another method of operating the parking machine is by push-button control, a method especially suitable for use in a public garage where the push-button can be located in the cashier's office.

The third method, the coin system, is the same as the push-button system except that a coin machine is used instead of push-buttons. The driver deposits a coin which opens the door and provides a space for parking his car. As in the push-button method, he takes a check which enables him to call his cage to the driveway level when he wishes his car. If he over-stays his time (should there be a time limit), he automatically is locked out, and, to get his car, is required to deposit additional money.

IT HANGS TOGETHER

Here you see one of the reasons why Brixment mortar cuts bricklaying costs—*the mortar hangs together.* . . It doesn't break off and fall to the ground before the joint is struck. As a result, no mortar is wasted and the bricklayer stoops less often to the mortar board. It doesn't slop down over the face of the wall. So less time is required to clean down the finished job. . . This is due to the fact that the plasticity of Brixment mortar does not depend upon the use of excessive water. . . *The mortar hangs together.*

LOUISVILLE CEMENT COMPANY, *Incorporated,* LOUISVILLE, KY.

District Sales Offices: 1610 Builders Bldg., *Chicago;* 600 Murphy Bldg., *Detroit;* 101 Park Ave., *New York*

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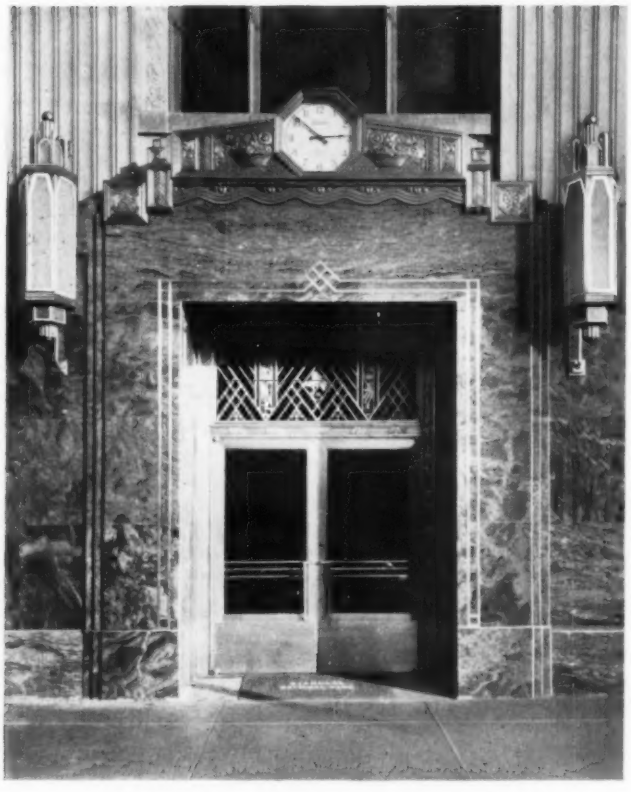
BRIXMENT

A Cement for Masonry and Stucco

LIGHTING FOR MODERN BANKING BUILDINGS ▪ ▪ ▪



EXTERIOR BRONZE BRACKETS
STANDARD NATIONAL BANK—CHICAGO
N. MAX DUNNING, ARCHITECT

In the more modest banking structures you will also find lighting fixtures by PEARLMAN. They are made to meet the specific requirements of design and available appropriation.

All of our facilities are available to the architectural profession for research and consultation. Ask us to send you our series of Lighting Studies in plate form as they appear —no obligation of course. » » »

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DESIGNERS AND MAKERS OF
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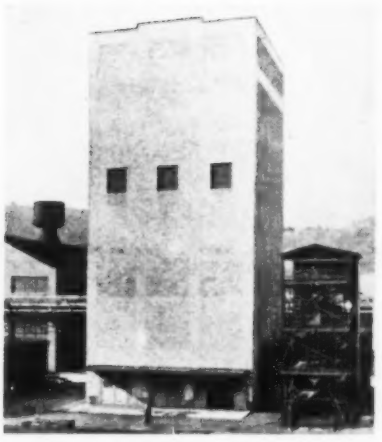


Parking machine built at East Pittsburgh Works of Westinghouse Electric and Manufacturing Company.

The present design of the machine operates at a chain speed of 100 feet per minute, so that the average time for bringing a cage to the driveway level is thirty seconds. When a cage is called to the driveway level, the machine automatically selects the shortest route.

Each machine of twenty-four parking spaces is 105 feet high and occupies a ground area of 16 feet by 24 feet for an automobile 18 feet long. Where several machines are installed most of them can be made for shorter automobiles, thus reducing the required ground area and the first cost. When desired, a less or greater number than twenty-four cradles may be used; for each pair of cradles omitted or added the structure is changed eight feet in height. The machine may be arranged for loading and unloading at either the bottom or the top of the loop.

"HOW TO JUDGE A HOUSE"

A light, readable book of 84 pages, fully illustrated, entitled "How to Judge a House," has just been issued by the National Committee on Wood Utilization of the Department of Commerce.

The purpose of the book is to furnish the prospective home buyer with basic information about site, design, construction, and equipment needed to make a wise and economical choice of the house already built. It tells how to judge the quality of building materials and construction methods upon which the security of the buyer's investment largely depends.

N. Max Dunning of Chicago, Fellow of the American Institute of Architects, is chairman of a special subcommittee composed of other prominent architects and representatives of the leading realtors', contractors', builders', and consumers' organizations of the country, under whose guidance the book was written. Nelson S. Perkins, construction engineer of the National Committee on Wood Utilization, is the author.

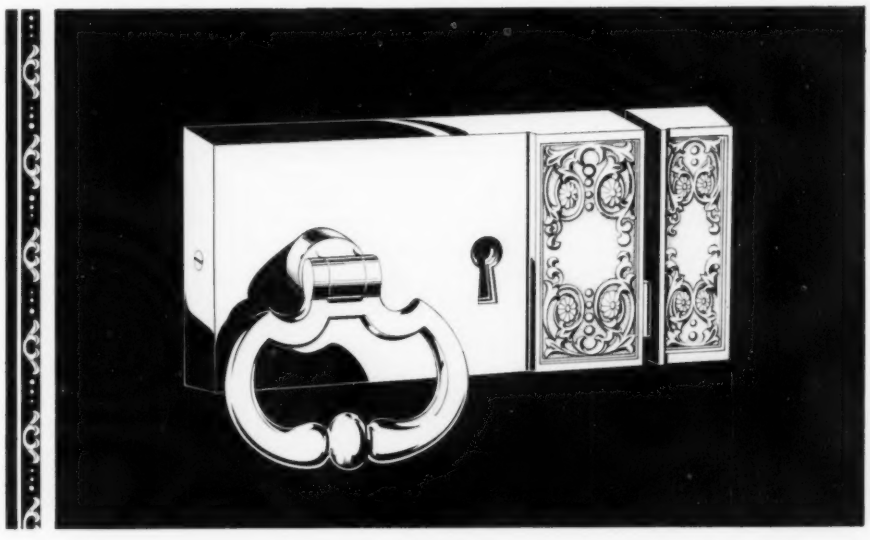
The new book may be obtained from the Superintendent of Documents, Goverment Printing Office, Washington, D. C., or from the district offices of the Department of Commerce in leading cities. It sells for 10 cents a single copy, $7 a hundred or $50 a thousand.

OKLAHOMA ARCHITECTS

A banquet and ball were given at the Huckins Hotel, Oklahoma City, April 27, by the Oklahoma State Association of Licensed Architects. A business session preceded the festivities.

EXCLUSIVE DESIGNS BY

RUSSWIN



⅝ ACTUAL SIZE

✣ ✣ a Classic MASTERPIECE

In this Rim-lock, RUSSWIN . . . creator of the NEW in hardware for almost a century . . . has caught and interpreted the spirit of sturdy, massive beauty so evident in Old World architectural design. The graceful pendant handle . . . the pleasing contrast of satin finish and delicate arabesque traceries . . . the perfection of workmanship . . . all combine to produce a lock of rare charm and distinction. Within, rugged durability and smooth-working mechanism are obtained by the use of the most enduring metals, bronze or brass . . . every component part hand fitted and adjusted by expert craftsmen. The new Rim-lock by RUSSWIN will render a lifetime of trouble-free service, and is eminently appropriate for the exclusive suite, foyer, stately town house, country home or manor.

■ For the architect's convenience, RUSSWIN hardware is illustrated and described in Sweet's Catalogues, Pages C-3700; C-3775

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Hardware that lasts – Rare Metals of Bronze or Brass

RUSSELL & ERWIN MANUFACTURING COMPANY (THE AMERICAN HARDWARE CORPORATION, SUCCESSOR)

New Britain, Connecticut New York Chicago London

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NOTABLE
STRUCTURE

BALTIMORE
TRUST
BUILDING

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BALTIMORE

One of the finest buildings in Baltimore. The Robert W. Hunt Company inspected the 7,567 Tons of structural steel required at both mill and shop and supervised its erection.

The Architects were Taylor & Fisher, and Smith & May, the Engineer was Herman F. Doeleman, and the General Contractor J. Henry Miller, Inc.

For complete information about Hunt inspection, tests and supervision for buildings and structures see Sweet's Architectural Catalogues A-119 or write us.

ROBERT W. HUNT COMPANY
Engineers
Inspection — Tests — Supervision
Insurance Exchange
CHICAGO
All Large Cities

H

AUDAC EXHIBITION

The Brooklyn Museum announces an exhibition of modern decoration and design by members of the American Union of Decorative Artists and Craftsmen, commonly known as AUDAC. The exhibition, which opens May 3, will include house and other furnishings, textiles, typography and book design and various examples of applied art.

This is the first large general exhibition of the society. Among the exhibitors will be Frank Lloyd Wright, Rockwell Kent, Lee Simonson, Joseph Urban, Paul T. Frankl, Gustave Breuhl and Gustave Jensen.

One of the important features of the show will be complete interior furnishings for a modern cottage, designed by Kem Weber of Hollywood, California, for the investor of moderate means. Mr. Weber's exhibition will show new methods of furniture construction. Donald Deskey will exhibit a guest room; Wolfgang and Pola Hoffmann an office; Alexander Kachinsky a reception office; Willis Harrison a bedroom; Gilbert Rohde a room.

SOME FACTS ABOUT SKYSCRAPERS

From the March 1931 issue of *Housing:*

The average European, who has heard so much about New York's skyscrapers, is led to believe that America is a country of skyscrapers and that these manifestations of the present day flourish throughout our entire land.

It will be of interest, therefore, at least to European students of American affairs to learn that in the whole nation there are but 377 skyscrapers or buildings exceeding 20 stories in height and 4,778 such buildings over 10 stories high—of which more than one-half are in the city of New York.

A survey of high buildings was made a few months ago by one of the leading builders of such structures. This survey covered 173 cities throughout the country—all those containing 50,000 population or more. For purposes of this study a skyscraper was defined as one 10 or more stories in height. It was found that there were 4,778 such buildings located in 131 different cities. Of these 131 cities, however, there were 59 that had but 5 buildings of this height, and out of all the cities of 50,000 population there were as many as 42 that had no buildings reaching the height of 10 stories.

Slightly more than one half the total number of skyscrapers in the country, 10 stories or more in height, are to be found in New York—2,479 out of a total of 4,778. In 6 cities, there are more than 100 buildings of this height. In addition to New York, Chicago leads with 449, Los Angeles follows with 135, Detroit with 121, Philadelphia with 120, and Boston with its narrow streets with 104.

Thirty-six different cities have one or more buildings over 20 stories in height. Of these New York has 188 such buildings, Chicago has 65, Philadelphia 22. There are 10 buildings in the country over 500 feet in height, and 5 others in course of construction.

The highest existing building at the time this survey was made, was the Woolworth Building,

AETNA LIFE
INSURANCE BUILDING
Hartford, Connecticut
Architect: James Gamble Rogers. Heating and Ventilating Engineer: Meyer, Strong & Jones, Inc., General Contractor: Geo. A. Fuller Co., Heating Contractor: Gillis & Geoghegan.

Planned for Generations to come

Founded, as every insurance company is, on the idea of providing for the future, the great Aetna Life and affiliated companies have given a noble embodiment to this idea in the building which is henceforth to be their home. With all that is most modern and most practical, the building has a very evident character of the institutional, the monumental, and the permanent.

Quite suitably, and recognizing, no doubt, that what has no past is "pretty sure of having no future", the designers have harked back to early traditions in this country. The result is a fine example of the American Colonial style, said to be the largest building of that style in existence, for any purpose.

Colonial architecture dominates the main entrance of Aetna's beautiful new home.

The choice of NATIONAL Pipe for a major use in so fine a project, so conceived and so designed, adds to the long record of testimony as to the character of—

America's Standard Wrought Pipe

NATIONAL TUBE COMPANY

Subsidiary of United States Steel Corporation

PITTSBURGH, PA.

NATIONAL PIPE

A Heatilator Fireplace

By FRANCIS KEALLY

Member, A. I. A., lecturer at the School of Architecture, New York University. One of a series by prominent American architects.

Mr. Keally says:

"In architecture, embellishments should express architectural functions—beautifully and honestly. The Heatilator grilles in the wall above and below the fireplace should be accepted by the architect as part of his job in design. As I see it, these units should be arranged and designed in such a way as to enhance the entire architectural composition around the fireplace. This I have tried to do in the accompanying sketch, which illustrates a fireplace in the corner of a small den.

"The fireplace always has been and always will be, I hope, the key-note in any room. It is the focal point toward which the family and their friends are attracted. To me, it is the most enchanting feature of a room, and not only should be made useful but romantic and charming. The Heatilator Company has contributed a basic means of improvement in fireplace construction which I believe is worthy of consideration by any prospective builder."

Specify Heatilators for all Fireplaces

The use of a Heatilator rarely adds more than $15-$25 to the cost of an ordinary fireplace—and it absolutely assures proper construction, good draft, freedom from smoke, and double heat from same fuel. Extensively advertised in national magazines, Heatilator fireplaces are looked for by people who buy or rent. To be strictly down to date, every house and apartment needs Heatilator-fireplace construction. Catalogued in Sweets. Full particulars on request. The Heatilator Company, 615 East Brighton Avenue, Syracuse, N. Y.

Heatilator
Fireplace Unit

whose 792 feet in height had not been surpassed in 16 years. Since then, however, the Chrysler Building has been completed, which reaches a height of 808 feet above the sidewalk, and the new Bank of Manhattan Building in Wall Street which mounts to a height of 836 feet—all of these to be out-topped by the new Empire State Building, now nearing completion, which rises to the height of 1100 feet.

From the point of view of the resident New Yorker it is interesting to learn that 50% of the buildings in that city from 10 to 20 stories in height—and 60% of those exceeding 20 stories in height—are located in the mid-town section between 14th and 59th street, far up-town from the financial district on the tip of Manhattan Island.

LE BRUN FELLOWSHIP AWARD

For the best design of a working boys' club, Bruno John Basil of Brooklyn has been awarded the Le Brun Traveling Scholarship for 1931. The award was made by the New York Chapter of the American Institute of Architects.

Mr. Basil, a graduate of Yale University, is employed in the office of Cass Gilbert.

First honorable mention went to Carl Bertel Lund, New York; second to Ralph Aubrey Jeffers, Elkton, Md.; third to Simon Breines, Brooklyn, and fourth to George Daub, Forest Hills, L. I.

The winner will study architecture in Europe. The scholarship, intended to supplement school and office experience, has a stipend of $1,400.

ROBERT D. KOHN'S ADDRESS AT THE A. I. A. CONVENTION

Creation of "a new kind of functional democracy within, and eventually outside, the building world of America" was foreseen by Robert D. Kohn of New York, president of the American Institute of Architects, in his address opening the Institute's sixty-fourth convention in San Antonio, Texas, on April 14.

The right of the architects of America to be directors of the building process can only be based on actual leadership of this democracy, already in the making, Mr. Kohn declared.

"We must," Mr. Kohn asserted, "make the architect capable of using the light gained through study of his more intimate problems to give him insight into the ways in which all of industry must eventually be changed if we are to move toward a better economic and political organization in the future."

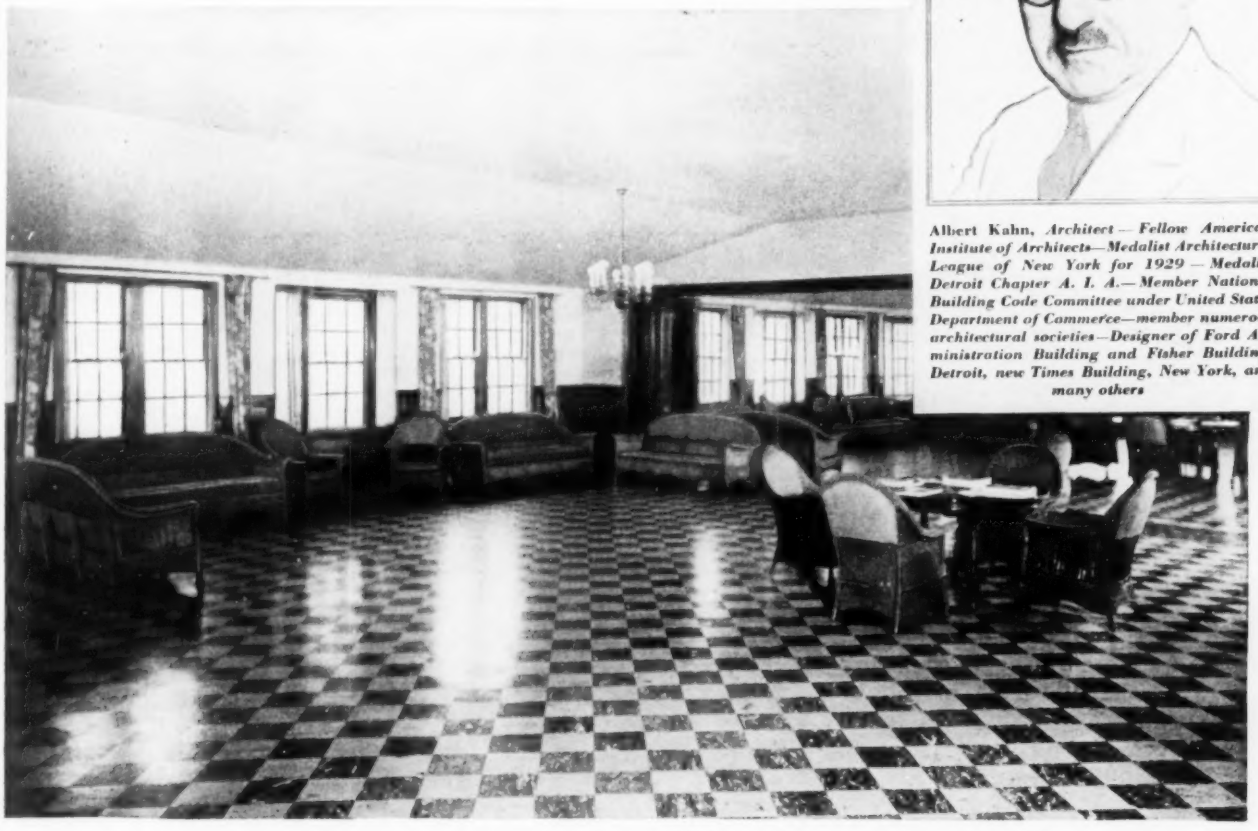
Artists, Mr. Kohn warned, must cease being rampant individualists, and must recognize themselves as part of a guild devoted to an art which can only be advanced as the whole group of its workers advances.

"A change has come over our social point of view," he continued. "Once architects were individualists. We avoided too close a contact with the common herd of workers, the builders and workmen and manufacturers. We were artists who must keep aloof from the world.

"Rubber Flooring has definitely established itself as an invaluable material in modern building. It serves admirably for many purposes and lends itself to architectural treatment with excellent results."

ALBERT KAHN—*Architect*

Albert Kahn, *Architect — Fellow American Institute of Architects—Medalist Architectural League of New York for 1929 — Medalist Detroit Chapter A. I. A.— Member National Building Code Committee under United States Department of Commerce—member numerous architectural societies—Designer of Ford Administration Building and Fisher Building, Detroit, new Times Building, New York, and many others*



Social Hall, Ford Administration Building, Detroit, Michigan, showing Goodyear Rubber Flooring

"*Rubber Flooring*—invaluable in modern building"

AS a material naturally suited for flooring rubber is hard to improve upon. It is impermeable to dirt and moisture, very durable, smooth, lustrous, and of course, easy underfoot. It has been in other directions that Goodyear designers have made their most notable improvements.

Now Goodyear Rubber Flooring is a material so ready for beauty in floor design that architects apply it in all types of buildings. There are no limits to the patterns you may make with Goodyear Rubber Flooring. A full range of attractive colors and textures invites your skill. There are moderate tones and tones brilliant and crisp. Whatever your need in color, Rubber Flooring supplies it; yet always with the cleanliness, permanence, and thrift requisite to practical modern building.

Have you full information on this helpful flooring? Write for Goodyear's booklet—A.I.A. File 23C—containing color plates of whole floor designs and complete installation data. Samples gladly furnished on request. Address, Goodyear, Akron, Ohio, or Los Angeles, California.

THE GREATEST NAME IN RUBBER

GOODYEAR

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RUBBER FLOORING

Converting the Client's Generalities

into

SPECIFICATIONS

for **Exactness in Designating Products Use the Name and Catalog Number . . .**

That's exactly the architect's function—to scan the hazy dreams in the mind of the man who wants to build—to bring these ideas down to earth and practicality—to build them high in architectural effect. This is all a process of getting down to facts, the more definite the better.

We speak then to remind you that the name "Rixson" definitely designates more than a line of Builders' Hardware:—a reputation of years standing, specialized designs, full experience in manufacture of its own specialities, and the confidence of many leading architects. Rixson stands for a group of facts. The Rixson product number stands for a very particular article and the service it performs.

Think in terms of name and number. Specifying cannot be too specific.

THE OSCAR C. RIXSON COMPANY
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Olive Knuckle Hinges	Butts, Pivots and Bolts
Friction Hinges	Door Stays and Holders

"Now we know better. Not only the esthetic and the technical contacts are to be fostered, and in a new way, but above all other things we know now that we need to understand the relations of architects as a group with the larger world of things. We must ask ourselves what is the place of the architect as a citizen in this changing world by reason of his being an architect."

A plan of adult education reaching the whole body of the architectural profession has been worked out by the Institute, Mr. Kohn reported, but its progress has been halted by the hard times. Through traveling lectureships, the Institute aims to make available to the members of its 66 chapters throughout the country the knowledge acquired by those who have had wider opportunities along special lines of practice.

A chief aim of the Institute is the improvement of government architecture, Mr. Kohn pointed out. This, he said, can be accomplished because of the superiority of American architects.

"If the Treasury Department," he explained, "could produce better built and better looking buildings with its staff of hundreds of Civil Service draftsmen than can the architects of the country in their private practice, then the Treasury Department should be left to its traditional policy.

"But we know that we can produce better work than they do. It is done currently in private practice all over the country."

THOMAS JEFFERSON

Jay E. House writes in the *New York Evening Post* about a famous architect:

"Jefferson was a manysided man. He was a fine architect and, in addition to his own, planned many of the beautiful homes in the Charlottesville vicinity. He played the violin divinely, and his head was full of curious notions. In the ladies' parlor in his home is the first parquetry floor ever laid. Jefferson thought it up. He invented the first dumb-waiter, which was designed to bring two bottles of wine from his cellar and return two empties with one motion. He thought up a weather vane for indicating the direction of the wind. It is fixed in the ceiling of his front porch and still works. He invented a calendar showing the day of the week, worked by weights attached to a clock. His home is full of original gimcracks of his own designing."

THEATERS

The conventional theater of today soon will be obsolete and balconies will be abolished, according to S. L. Rothafel ("Roxy") owner of The Roxy Theater, in an article in the *New York Herald Tribune*:

"I believe that new theaters will abolish balconies because balconies tend to divide audiences. Under the new plan orchestra floors will be saucer-like but irregular, resembling a kidney—narrow at the front and wide at the rear. The bank of the floor may run to the ceiling, but every seat will face the screen."